THE STATE OF SOUTH CAROLINA
IN THE COURT OF APPEALS

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SC Court of Appeals

APPEAL FROM THE ADMINISTRATIVE LAW COURT
The Honorable Ralph King Anderson, III
Administrative Law Judge

Case No. 2017-002598

CHARLES S. BLACKMON AND SOUTH CAROLINIANS FOR RESPONSIBLE AGRICULTURAL PRACTICES, ... APPELLANTS,

v.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL, AND DAVID COGGINS BROILERS, ... RESPONDENTS,

CHARLES S. BLACKMON AND SOUTH CAROLINIANS FOR RESPONSIBLE AGRICULTURAL PRACTICES, ... APPELLANTS,

v.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL, AND HEATH COGGINS BROILERS, ... RESPONDENTS,

CHARLES S. BLACKMON AND SOUTH CAROLINIANS FOR RESPONSIBLE AGRICULTURAL PRACTICES, ... APPELLANTS,

v.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL, AND JIM YOUNG BROILERS, ... RESPONDENTS.

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Volume 4 of 4
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RECORD ON APPEAL
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SOUTH CAROLINA
AGRI-WASTE TECHNOLOGY INC. No. 3399
CERTIFICATE OF AUTHORIZATION

AWT
Engineers and Soil Scientists

Agri-Waste Technology, Inc.
501 N. Salem Street, Suite 203
Apex, North Carolina 27502
919-859-0669
www.agriwaste.com

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 25556
CHRISTOPHER T. MOSLEY

6/22/16

Comprehensive Nutrient Management Plan (CNMP)
(Version 2, 9/14/2011 Format)

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 animal feeding operation. It includes background information and provides guidance, reference information and Web-based sites where up-to-date information can be obtained. Refer to the Producer Activity Document (PAD) for information about day-to-day management activities and recordkeeping. Both this CNMP document and the PAD document shall remain in the possession of the producer/landowner.

Farm/Facility: Jim Young Broilers

Farm Address:
Lisbon Rd near Hwy 72
Mountville, SC 29370
803-479-1363

Mailing Address:
107 Batteaux Pl.
Blythewood, SC 29016

Owner/Operator: James Young Jr.

Driving Directions: (From Mountville P.O.) Head E on Mountville Rd. and turn left onto SC-72 E, drive 1.8 miles. Turn left onto Lisbon Rd. drive 0.3 miles the farm is on the right.

County or Local Zoning Restrictions: There are no county or local zoning restrictions that impact this CNMP.

Hydrologic Unit Code (Facility): 030501090905

Flood Plain: The facility is located outside the 100-yr floodplain according to FEMA Maps FEMA FIRM Map 45059 C0365C.

Farm Headquarters Latitude/Longitude: 34° 23' 24.193" N 81° 57' 19.432" W
34.39005 -81.95539

Owner

Owner/Operator: James Young Jr.	Phone: 803-479-1363
Address: 107 Batteaux Pl. Blythewood, SC 29016	

The following people have assisted with the development of the CNMP and certify that their element meets all applicable NRCS standards.

Manure Handling and Storage

Signature: Chris J Mosley	Date: 6/22/16
Name: Chris Mosley, P.E.	
Title: Vice President, Senior Project Engineer	

Nutrient Management

Signature: Chris J Mosley	Date: 6/22/16
Name: Chris Mosley, P.E.	
Title: Vice President, Senior Project Engineer	

Land Treatment Practices

Signature: Chris J Mosley	Date: 6/22/16
Name: Chris Mosley, P.E.	
Title: Vice President, Senior Project Engineer	

Comprehensive Nutrient Management Plan

I certify that I have reviewed this plan for technical adequacy and that the elements of the CNMP are compatible, reasonable, and able to be implemented. All elements meet NRCS standards and specifications as well as requirements set forth by the South Carolina Department of Health and Environmental Controls.	
Signature: Chris J Mosley	Date: 6/22/16
Name: Chris Mosley, P.E.	
Title: Vice President, Senior Project Engineer	

Owner

As the owner/operator, I certify that I, as the decision-maker, have been involved in the planning process and agree the items/practices listed in each element are needed. I understand that I am responsible for complying with SCDHEC Regulation 61-43 and 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.	
Signature:	Date: 6/2/16

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Section 1. Background and Site Information

1.1. General Description of Operation

Jim Young Broilers is a planned six barn (66' X 600' Facility in Mountville, SC. The planned population is 237,600 broilers with 39,600 in each house. Broilers will be raised on compacted clay floors covered with shavings. The exhaust fans for each barn will be on the NE ends and the barns will be spaced 60' apart. Approximately 4.5 flocks will be raised from 0.1 lbs. to 9 lbs. Each flock will be raised 8-9 weeks with 2-3 weeks between flocks. The normal production live weight is approximately 1,081,080 lbs. Barns will be windrowed and have 1/3 of the litter removed every other flock and have crusting for all other flocks. Approximately 1,449 tons of litter will be produced each year.

Litter will be spread using a pull behind spreader onto 192.7 spreadable acres. All fields are in a corn, wheat, soybean rotation and are no-till planted. Litter will be spread pull behind solid spreader. Excess litter will be exported by L & M Litter Brokers (19,463-AG). Two planned 40' X 200' stacking shed will hold litter from cleanouts. Both stacking shed will be built at a later date once DHEC has approved the plans and specs.

Normal mortalities will be handled through burial and a planned 22' 90' composter. The composter will be built at a later date once the plans and specs have been approved by DHEC. Emergency mortalities will be buried.

1.2. South Carolina Agricultural Facilities Permit, Stacking Shed, and Composter Application Form

D H E C
PROMOTE PROTECT PROSPER

Standard Application Form for New or Expanding Agricultural Animal Facilities (other than swine)

Please Type or Print

Section 1 – FACILITY INFORMATION

DATE _____ FACILITY NUMBER ND ~~N/A~~ 0089354

NEW X OR EXPANDING _____ FACILITY

IF EXPANDING: PERMIT NUMBER N/A DATE ISSUED N/A

FARM NAME Jim Young Broilers

COUNTY Laurens COMMUNITY Mountville

LOCATION Lisbon Rd. Near Hwy 72 Mountville, SC 29370

IS THIS FARM PLANNING TO BE A CONTRACT GROWER WITH AN INTEGRATOR? (YES) or NO

NAME OF INTEGRATOR Amick Farms

Section 2 – CONTACT INFORMATION

PERMIT APPLICANT James Young Jr.

ADDRESS 107 Botteaux Pl. Blythewood, SC 29016

PHONE NUMBER (WORK) 803-479-1363 (HOME) _____ (CELL/BEEPER) _____

ARE YOU THE PROPERTY OWNER OF RECORD? (YES) or NO IF NO, PROVIDE INFORMATION:

PROPERTY OWNER OF RECORD _____

ADDRESS _____

PHONE NUMBER (WORK) _____ (HOME) _____ (CELL/BEEPER) _____

OPERATOR'S NAME Same as permit applicant

ADDRESS _____

PHONE NUMBER (WORK) _____ (HOME) _____ (CELL/BEEPER) _____

PLAN PREPARER Chris Mosley

TITLE/SC REGISTRATION NUMBER P.E. 25556

ADDRESS 501 N. Salem St. Suite 203, Apex, NC 27502

PHONE NUMBER (WORK) 919-367-6311 (FAX) 919-233-1970 (CELL/BEEPER) _____

Section 3 – ANIMAL TYPES & NUMBERS

AVERAGE ANIMAL LIVE WEIGHT = $\frac{\text{average exit weight} + \text{average entry weight}}{2}$ = $\frac{(0.1) + (9.0)}{2}$ = 4.55 pounds

Type(s) of Animals	Maximum # of Animals (at any one time)	Normal Production Live Weight (pounds)	Total Manure (tons/yr or gal/yr)	Manure to Treatment System	Additional Scraped Solids or Compost	Acres for Land Application
Broilers	237,600	1,081,080	1,449	Stacking Shed	N/A	192.7

Section 4 – MANURE HANDLING & TREATMENT

MANURE HANDLING: (DRY) or WET COMPOSTER: YES or (NO) STACKING SHED: YES or (NO)
TREATMENT PROPOSED N/A
ARE YOU LAND APPLYING THE MANURE? (YES) or NO
DO YOU OWN ALL OF THE MANURE UTILIZATION AREAS? YES or (NO)
CONTRACT DISPOSAL OF MANURE WITH BROKER? (YES) or NO
NAME OF BROKER L & M Litter Brokers
IS INNOVATIVE OR ALTERNATIVE TECHNOLOGY BEING PROPOSED FOR THIS FACILITY? YES or (NO)
ARE YOU APPLYING FOR EXCEPTIONAL QUALITY COMPOST QUALIFICATION? YES or (NO)
NUMBER OF GROUNDWATER MONITORING WELLS PROPOSED 0
VOLUME OF LAGOON OR STORAGE POND (if applicable) N/A cubic feet
NUMBER OF HOUSES/GROWING AREAS: Existing 0 Proposed 6
ARE YOU A TRAINED MANURE MANAGER? YES or (NO) TRAINING DATE N/A

Section 5 – FACILITY SEPARATION DISTANCES

SEPARATION DISTANCES:	ANIMAL GROWING AREA (HOUSES OR BARNS)		LAGOON, STORAGE POND OR TREATMENT SYSTEM	
	Required	Actual	Required	Actual
POTABLE WELLS	200 feet	**1786'**	200 feet	
POTABLE WELLS OWNED BY THE APPLICANT	50 feet	**NA**	100 feet	
WATERS OF THE STATE LOCATED DOWNSLOPE (excluding ephemeral & intermittent streams)	100 feet	**1760'**	100 feet	
OUTSTANDING RESOURCE WATERS, CRITICAL HABITATS FOR ENDANGERED SPECIES, SHELLFISH HARVESTING WATERS	100 feet	**27,498'**	500 feet	
EPHEMERAL OR INTERMITTENT STREAMS LOCATED DOWNSLOPE	100 feet*	**426'**	100 feet*	
DITCHES OR SWALES LOCATED DOWNSLOPE	50 feet*	**113'**	50 feet*	
PROPERTY LINE (500,000 lbs or less) (can be reduced or waived with written consent)	200 feet	**NA**	300 feet	
PROPERTY LINE (500,001 lbs or greater) (can be reduced or waived with written consent)	400 feet	**422'**	500 feet	
OCCUPIED PERMANENT RESIDENCE (can be reduced or waived with written consent)	1000 feet	**1786'**	1000 feet	

*distance may be reduced if a vegetative water quality buffer that meets NRCS guidelines is installed and maintained.

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Stormwater, Construction & Agricultural Permitting Division

Section 6 – MANURE UTILIZATION AREA SEPARATION DISTANCES

For more fields please make copies of this page and add as additional sheets.

SEPARATION DISTANCES:	Tract #→							
	Field #→	Zone 1-4	35ac. Field	Michael Back	Michael House	Calvins	Triangle Field	Alfalfa
POTABLE WELL	200 ft	**300'**	**760'**	**300'**	**300'**	**1015'**	**1423'**	**300'**
WATERS OF THE STATE LOCATED DOWNSLOPE	100 ft*	**100'**	**564'**	**100'**	**100'**	**100'**	**1708'**	**679'**
EPHEMERAL & INTERMIT. STREAMS DOWNSLOPE	100 ft*	**100'**	**564'**	**100'**	**100'**	**100'**	**1708'**	**679'**
DITCHES DOWNSLOPE	50 ft	**100'**	**385'**	**50'**	**50**	**75'**	**254'**	**119'**
RESIDENCE	300 ft**	**300'**	**760'**	**300'**	**300'**	**1015'**	**1423'**	**300'**

DHEC 3680 (02/2010)

Section 4 – MANURE HANDLING & TREATMENT

MANURE HANDLING: (DRY) or WET COMPOSTER: YES or (NO) STACKING SHED: YES or (NO)
TREATMENT PROPOSED N/A
ARE YOU LAND APPLYING THE MANURE? (YES) or NO
DO YOU OWN ALL OF THE MANURE UTILIZATION AREAS? YES or (NO)
CONTRACT DISPOSAL OF MANURE WITH BROKER? (YES) or NO
NAME OF BROKER L & M Litter Brokers
IS INNOVATIVE OR ALTERNATIVE TECHNOLOGY BEING PROPOSED FOR THIS FACILITY? YES or (NO)
ARE YOU APPLYING FOR EXCEPTIONAL QUALITY COMPOST QUALIFICATION? YES or (NO)
NUMBER OF GROUNDWATER MONITORING WELLS PROPOSED 0
VOLUME OF LAGOON OR STORAGE POND (if applicable) N/A cubic feet
NUMBER OF HOUSES/GROWING AREAS: Existing 0 Proposed 6
ARE YOU A TRAINED MANURE MANAGER? YES or NO TRAINING DATE N/A

Section 5 – FACILITY SEPARATION DISTANCES

SEPARATION DISTANCES:	ANIMAL GROWING AREA (HOUSES OR BARNS)		LAGOON, STORAGE POND OR TREATMENT SYSTEM	
	Required	Actual	Required	Actual
POTABLE WELLS	200 feet	1786'	200 feet	
POTABLE WELLS OWNED BY THE APPLICANT	50 feet	~~149'~~ n/a	100 feet	
WATERS OF THE STATE LOCATED DOWNSLOPE (excluding ephemeral & intermittent streams)	100 feet	~~1564'~~ 1760'	100 feet	
OUTSTANDING RESOURCE WATERS, CRITICAL HABITAT FOR ENDANGERED SPECIES, SHELLFISH HARVESTING WATERS	100 feet	27,498'	500 feet	
EPHEMERAL OR INTERMITTENT STREAMS LOCATED DOWNSLOPE	100 feet*	426'	100 feet*	wetlands delineation
DITCHES OR SWALES LOCATED DOWNSLOPE	~~50 feet*~~	113' ?	50 feet*	
PROPERTY LINE (500,000 lbs or less) (can be reduced or waived with written consent)	200 feet	NA	300 feet	
PROPERTY LINE (500,001 lbs or greater) (can be reduced or waived with written consent)	~~400~~ feet	422'	500 feet	
OCCUPIED PERMANENT RESIDENCE (can be reduced or waived with written consent)	1000 feet	1786'	1000 feet	

*distance may be reduced if a vegetative water quality buffer that meets NRCS guidelines is installed and maintained.

Section 6 – MANURE UTILIZATION AREA SEPARATION DISTANCES

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DEC 07 2016
Water, Construction & Aquaculture Permitting Division

For more fields please make copies of this page and add as additional sheets.

SEPARATION DISTANCES:	Tract #→							
	Field #→	Zone 1-4	35ac. Field	Michael Back	Michael House	Calvins	Triangle Field	Alfalfa
POTABLE WELL	200 ft	300'	760'	300'	300'	1015'	1423'	300'
WATERS OF THE STATE LOCATED DOWNSLOPE	100 ft*	100'	564'	100'	100'	100'	1708'	
EPHEMERAL & INTERMIT. STREAMS DOWNSLOPE	100 ft*	100'	564'	100'	100'	100'	1708'	679'
DITCHES DOWNSLOPE	50 ft	100'	385'	50'	50	75'	254'	119'
RESIDENCE	300 ft**	300'	760'	300'	300'	1015'	1423'	300'

DHEC 3580 (02/2010)

Jim

Section 4 – MANURE HANDLING & TREATMENT

MANURE HANDLING: (DRY) or WET COMPOSTER: (YES) or NO STACKING SHED: (YES) or NO

TREATMENT PROPOSED Stacking Shed

ARE YOU LAND APPLYING THE MANURE? (YES) or NO

DO YOU OWN ALL OF THE MANURE UTILIZATION AREAS? YES or (NO)

CONTRACT DISPOSAL OF MANURE WITH BROKER? (YES) or NO

NAME OF BROKER L & M Litter Brokers

IS INNOVATIVE OR ALTERNATIVE TECHNOLOGY BEING PROPOSED FOR THIS FACILITY? YES or (NO)

ARE YOU APPLYING FOR EXCEPTIONAL QUALITY COMPOST QUALIFICATION? YES or (NO)

NUMBER OF GROUNDWATER MONITORING WELLS PROPOSED 0

VOLUME OF LAGOON OR STORAGE POND (if applicable) N/A cubic feet

NUMBER OF HOUSES/GROWING AREAS: Existing 0 Proposed 6

ARE YOU A TRAINED MANURE MANAGER? YES or (NO) TRAINING DATE N/A

Section 5 – FACILITY SEPARATION DISTANCES

SEPARATION DISTANCES:	ANIMAL GROWING AREA (HOUSES OR BARNS)		LAGOON, STORAGE POND OR TREATMENT SYSTEM	
	Required	Actual	Required	Actual
POTABLE WELLS	200 feet	1768' 1961 1976	200 feet	
POTABLE WELLS OWNED BY THE APPLICANT	50 feet	63'	100 feet	
WATERS OF THE STATE LOCATED DOWNSLOPE (excluding ephemeral & intermittent streams)	100 feet	1672' 1770	100 feet	
OUTSTANDING RESOURCE WATERS, CRITICAL HABITATS FOR ENDANGERED SPECIES, SHELLFISH HARVESTING WATERS	100 feet	27,020'	500 feet	
EPHEMERAL OR INTERMITTENT STREAMS LOCATED DOWNSLOPE	100 feet*	538' 1996	100 feet*	
DITCHES OR SWALES LOCATED DOWNSLOPE	50 feet*	127'	50 feet*	
PROPERTY LINE (500,000 lbs or less) (can be reduced or waived with written consent)	200 feet	NA	300 feet	
PROPERTY LINE (500,001 lbs or greater) (can be reduced or waived with written consent)	400 feet	427 136'	500 feet	
OCCUPIED PERMANENT RESIDENCE (can be reduced or waived with written consent)	1000 feet	1768' 1864	1000 feet	

*distance may be reduced if a vegetative water quality buffer that meets NRCS guidelines is installed and maintained.

Section 6 – MANURE UTILIZATION AREA SEPARATION DISTANCES

For more fields please make copies of this page and add as additional sheets.

SEPARATION DISTANCES:	Tract #→							
	Field #→	Zone 1-4	35ac. Field	Michael Back	Michael House	Calvins	Triangle Field	Alfalfa
POTABLE WELL	200 ft	300'	760'	300'	300'	1015'	1423'	300'
WATERS OF THE STATE LOCATED DOWNSLOPE	100 ft*	100'	564'	100'	100'	100'	1708'	678'
EPHEMERAL & INTERMIT. STREAMS DOWNSLOPE	100 ft*	100'	564'	100'	100'	100'	1708'	679'
DITCHES DOWNSLOPE	50 ft	100'	385'	50'	50	75'	254'	119'
RESIDENCE	300 ft**	300'	760'	300'	300'	1015'	1423'	300'

DHEC 3580 (02/2010)

MANURE UTILIZATION AREA TABLE CONTINUED

SEPARATION DISTANCES:	Tract #→							
	Field #→	Big Field	Walnut					
POTABLE WELL	200 ft	300'	496'					
WATERS OF THE STATE LOCATED DOWNSLOPE	100 ft*	252'	100'					
EPHEMERAL & INTERMIT. STREAMS DOWNSLOPE	100 ft*	252'	100'					
DITCHES DOWNSLOPE	50 ft	73'	161'					
RESIDENCE	300 ft**	300'	496'					

* Reduced to 75 ft for incorporated manure, and 50 ft for injection or incorporation within 24 hours.
**If method of application is injection or immediate incorporation, then manure may be spread to the property line. All residence setbacks may be reduced by consent of the owner of the residence.

Section 7 -- PERMIT APPLICATION SUBMITTAL REQUIREMENTS

SUBMITTAL PACKAGE SHOULD INCLUDE 2 COPIES OF THE FOLLOWING ITEMS (CHECK EACH ONE SUBMITTED):

X 1. ORIGINAL APPLICATION (and 1 copy of the original)
X 2. ANIMAL FACILITY MANAGEMENT PLAN
   a. Animal Manure Management System Description
   b. Design Calculations and Construction Details for treatment/storage structure, including exact location and design information.
   c. Concentration of Manure Constituents
   d. Crop Management Plan (including contracts for each field not owned by the applicant, field owner's name and contact information)
   e. Type of Waste Transport/Spreading Equipment (if applicable)
   f. Spray Application System Specifications and Details (if applicable)
   g. Manure Utilization Area Information and Maps
   h. Soils Information (maps & descriptions)
   i. Location maps (showing facility, treatment/storage structure, and all fields)
   j. Copy of Tax Map (identifying all adjoining property owners within 1320 feet of the facility with names & addresses)
   k. 100 year floodplain locations (facility may not be located in the 100-year floodplain)
N/A 3. GROUNDWATER MONITORING WELL PROGRAM & DETAILS (if applicable)
X 4. ODOR ABATEMENT PLAN
X 5. VECTOR ABATEMENT PLAN
X 6. PRIMARY METHOD OF DEAD ANIMAL DISPOSAL: Burial & ~~Composting~~
X 7. ALTERNATIVE METHOD OF DEAD ANIMAL DISPOSAL FOR EXCESSIVE MORTALITY: Burial
X 8. CONTRACTS FOR CONTRACT DISPOSAL OF DEAD ANIMALS OR MANURE (if applicable)
X 9. SOIL MONITORING PLAN
N/A 10. PLANS & SPECIFICATIONS FOR ALL OTHER TREATMENT OR STORAGE STRUCTURES (composter, stacking shed, etc...)
X 11. NOTICES OF INTENT FROM ALL PROPERTY OWNERS WITHIN 1320 FEET OF THE FOOTPRINT OF THE FACILITY
X 12. EMERGENCY PLAN
X 13. WRITTEN CONSENT FOR WAIVING OR REDUCING SETBACKS (if applicable)
N/A 14. ALTERNATIVE TECHNOLOGY PROPOSAL (if applicable): Specifications, and a detailed report including purpose and expected benefits.
X 15. APPLICATION FEE: See instructions on the back of this page for amount.
X 16. ANNUAL OPERATING FEE: See instructions for amount (first year's fee must be submitted before permit is issued).

Section 8 - CERTIFICATION

I HEREBY CERTIFY THAT ALL OPERATIONS, MAINTENANCE AND ASSOCIATED ACTIVITY PERTAINING TO THIS SITE SHALL BE ACCOMPLISHED PURSUANT TO AND IN KEEPING WITH THE TERMS AND CONDITIONS OF THE APPROVED PLANS; I HAVE READ THIS APPLICATION AND AGREE TO THE REQUIREMENTS AND CONDITIONS THAT ARE CONTAINED WITHIN. THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I HEREBY GRANT AUTHORIZATION TO THE DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL THE RIGHT OF ACCESS TO THE SITE AT ALL REASONABLE HOURS FOR THE PURPOSE OF SAMPLING AND ON SITE INSPECTIONS.

James Young Jr.
Printed Name /Owner or Lessee

Signature/Owner or Lessee

I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THE DESIGN IS CONSISTENT WITH THE REQUIREMENTS OF TITLE 48, CHAPTER 1 OF THE 1987 SC CODE OF LAWS, AND PURSUANT REGULATION 61-43 AND APPROPRIATE NRCS STANDARDS.

Chris Mosley
Printed Name/Plan Preparer

Signature/Plan Preparer

DHEC 3580 (02/2010)

APPLICATION INSTRUCTIONS - Agricultural Animal Facility Permit

Purpose: This form must be completed as part of an application package submitted for DHEC approval of proposed NEW or EXPANDING agricultural animal facilities. The required items should be checked to ensure that a complete administrative package has been submitted. If a complete administrative package is not submitted, the entire project may be returned.

Item-by-Item Instructions: ***Section 1 - Facility Information.*** *Date*: Enter the date of application. *Facility Number*: Leave blank, Department staff will assign a facility number. *New or Expanding Facility:* If this application is for an existing facility that has previously obtained an agricultural animal facility permit from DHEC, then indicate by checking EXPANSION or NEW if a new facility is being proposed. If an Expansion, provide the following: *Permit Number;* Provide the permit number for the permitted facility, and *Date Issued;* Provide the date on which DHEC issued the permit. *Farm Name*: Give the name of the proposed agricultural animal facility. *County*: Give the county in which the proposed facility is to be located. *Community*: Give the name of the community in which the proposed facility is to be located. *Location*: Give directions to the proposed facility from the nearest town or state road. *Integrator Information:* Circle YES or NO to indicate whether this farm will be under contract with an integrator or integrating company. Provide the Name of the Integrator for this facility.

Section 2 - Contact Information. *Permit Applicant*: Enter the name, address and phone numbers for the person who is applying for the permit. Circle YES or NO to indicate whether the permit applicant is the property owner of record. *Property Owner of Record*: Enter the name, address and phone number of the person who legally owns the property on which the proposed agricultural animal facility is to be located. *Operator*: Enter the name, address and phone number of the person who will be responsible for the daily operation of the proposed facility. *Plan Preparer*: Enter the name of the plan preparer. *Title/SC Registration Number*: Enter the title and SC registration number (if applicable) of the person responsible for the design of the Animal Facility Management plan. *Address, Phone Number*: Enter the business address and phone numbers for the plan preparer.

Section 3 – Animal Types & Numbers. *Average Animal Live Weight*: Calculate the average weight of one animal unit by taking the average exit weight plus the average entry weight and divide by two. *Type of Animal Operation*: Indicate the type of animal proposed to be grown at this facility (i.e. dairy, turkey, broiler, etc....). *Maximum # of Animals (at any one time)*: Indicate the maximum number of each type of animal at the facility at any one time. *Normal Production Animal Live Weight* (lbs): The maximum number of animals at the facility at any one time multiplied by the average animal live weight of those animals. *Total Manure Produced (tons/year or gal/year)*: The total amount of manure produced by the animals in the span of one year. This amount should be represented in tons per year for dry manure and in gallons per year for wet manure. *Manure to Treatment System:* Provide the amount of manure or wastewater that is conveyed to a treatment system (if applicable). *Additional Scraped Solids or Compost:* Provide the amount of manure or solids that may be scraped at the barn, rather than conveyed to the treatment system. Or provide the amount of compost produced at a facility (if applicable). *Acres for Land Application*: The value here should be the number of acres available, that you would like to designate as manure utilization areas.

Section 4 – Manure Handling & Treatment. *Manure Handling*: Circle DRY or WET to indicate the type of manure handling for this operation. *Treatment Proposed:* Describe the type of manure treatment being proposed at the facility. *Land Application*: Circle YES or NO to indicate whether the manure will be land applied. *Owner of Manure Utilization Areas:* Circle YES or NO to indicate whether the permit applicant owns all of the manure utilization areas. If the applicant does not own all of the manure utilization areas, then owner information must be provided for each manure utilization area in the Animal Facility Management Plan. *Manure Broker*: Circle YES or NO to indicate whether a manure broker will be used for contract disposal of the manure from this facility and provide the name of the broker to be used (if applicable). *Treatment Technology*: Circle YES or NO to indicate whether innovative and alternative technology is being proposed for this facility. *Exceptional Quality Compost*: Circle YES or NO to indicate whether you are applying for the manure treated at your facility to qualify as exceptional quality compost (must meet product quality standards outlined in Part 300 of R.61-43). *Number of Groundwater Monitoring Wells*: Provide the number of groundwater monitoring wells that are proposed for this facility. *Volume of Lagoon or Storage Pond*: Provide the volume area of the proposed lagoon or storage pond. If more than one lagoon or storage pond is utilized, please provide the volume of each structure separately. *Number of Houses*: Indicate the number of existing and proposed houses that will be located on this property (All houses located on the same property tract must be considered one facility). *Trained Manure Manager*: Circle YES or NO to indicate whether the operator of the proposed facility has attended the certified manure manager's training and certification class conducted by Clemson Extension Service. Indicate the date on which the certification or training was obtained.

Section 5 – Facility Separation Distances. *Separation Distances*: This table outlines the required setbacks for the barns, lagoons, manure storage ponds or manure treatment systems. Enter the actual separation distance for the proposed facility in the appropriate spaces.

Section 6 – Manure Utilization Area Information. This table outlines the required setbacks for manure utilization areas. Enter field identification information, tract number, field number, and the actual separation distances for each manure application field in the appropriate spaces. Make copies of this section if you need additional tables for the field information.

Section 7 – Permit Application Submittal Requirements. Check each item that is being submitted as a part of this application. *All* items under Section 7 should be submitted to DHEC for review. In accordance with the **Environmental Protection Fee Reg. 61-30**, an application fee is required for submitting an Application for agricultural animal facilities. There is a requirement that DHEC meet certain time frames when processing permit applications. The "DHEC Time" is not the total time but rather it is the time that DHEC spends working on an application after a complete package is received. "DHEC Time" does not include the time an applicant takes to supply any information that may be requested by DHEC. The fees and time frames are as follows:

Agricultural Permit Application Fees

Facility Type	*DHEC Time*	*Fee*
Animal Facilities with wet manure handling	120 days	$240
Animal Facilities with dry manure handling	90 days	$165

Note: Please make **CHECKS** payable to SC DHEC/Bureau of Finance.

Regulation R61-30 also authorizes DHEC to assess annual environmental operating permit fees for certain permits. All new facilities must submit payment for the first years operating fee before the permit to construct is issued. The operating fee is $150 per year for animal facilities with wet manure handling operations and $75 per year for animal facilities with dry manure handling operations.

Section 8 – Certification. For this section, please read the certification statements and have the appropriate person(s) sign the certification.

DHEC Processing Procedures:

Two (2) copies of the submittal package are submitted to DHEC. After Permitting, DHEC files the original in the main project file, located in DHEC's central office. DHEC sends a copy of the approved package to the appropriate EQC Region Office.

DHEC 3580 (02/2010)

D H E C

PROMOTE PROTECT PROSPER

Standard Application Form for an Agricultural Permit for Stacking Sheds/Composters

Please Type or Print

Section 1 – FARM INFORMATION

DATE _____ OPERATION NUMBER ND N/A

NEW X OR EXISTING _____ OPERATION

IF EXISTING: PERMIT NUMBER N/A DATE ISSUED N/A

FARM NAME Jim Young Broilers

COUNTY Laurens COMMUNITY Mountville

LOCATION Lisbon Rd. Near Hwy 72 Mountville, SC 29370

APPLICATION FOR STACKING SHED X COMPOSTER _____ COMBINATION _____

DOES THE STRUCTURE MEET NRCS SPECIFICATIONS? (YES) or NO

ARE YOU APPLYING FOR EXCEPTIONAL QUALITY COMPOST QUALIFICATION? YES or (NO)

IS THIS FACILITY ASSOCIATED WITH A MANURE BROKERING OPERATION? (YES) or NO

DOES THIS OPERATION HAVE A TRAINED MANURE MANAGER? YES or (NO) TRAINING DATE N/A

Section 2 – CONTACT INFORMATION

PERMIT APPLICANT James Young Jr.

ADDRESS 107 Botteaux Pl. Blythewood, SC 29016

PHONE NUMBER (WORK) 803-479-1363 (HOME) _____ (CELL/BEEPER) _____

ARE YOU THE PROPERTY OWNER OF RECORD? (YES) or NO IF NO, PROVIDE INFORMATION:

PROPERTY OWNER OF RECORD _____

ADDRESS _____

PHONE NUMBER (WORK) _____ (HOME) _____ (CELL/BEEPER) _____

RECEIVED

OPERATOR'S NAME Same as permit Applicant

ADDRESS _____

DEC 08 2016

PHONE NUMBER (WORK) _____ (HOME) _____ (CELL/BEEPER) _____

Stormwater, Construction & Agricultural Permitting Division

PLAN PREPARER _____

TITLE/SC REGISTRATION NUMBER _____

ADDRESS _____

PHONE NUMBER (WORK) _____ (FAX) _____ (CELL/BEEPER) _____

Section 3 – STORAGE/COMPOSTING FACILITY SEPERATION DISTANCES

SEPARATION DISTANCES:	MANURE STORAGE/COMPOSTING STRUCTURES		
	Required	SS1 Actual	SS2
POTABLE WELLS	100 feet	2465'	2122'
POTABLE WELLS OWNED BY THE APPLICANT	50 feet	NA	NA
WATERS OF THE STATE LOCATED DOWNSLOPE (Including ephemeral & Intermittent streams)	100 feet*	332'	258'
DITCHES OR SWALES LOCATED DOWNSLOPE	50 feet*	89'	65'
PROPERTY LINE	200 feet**	779'	440'

*distance may be reduced if a vegetative water quality buffer that meets NRCS guidelines is installed and maintained.

D H E C
PROMOTE PROTECT PROSPER

Standard Application Form for an Agricultural Permit for Stacking Sheds/Composters

Please Type or Print

Section 1 – FARM INFORMATION

DATE _____ OPERATION NUMBER ND N/A

NEW X OR EXISTING _____ OPERATION

IF EXISTING: PERMIT NUMBER N/A DATE ISSUED N/A

FARM NAME Jim Young Broilers

COUNTY Laurens COMMUNITY Mountville

LOCATION Lisbon Rd. Near Hwy 72 Mountville, SC 29370

APPLICATION FOR STACKING SHED X COMPOSTER _____ COMBINATION _____

DOES THE STRUCTURE MEET NRCS SPECIFICATIONS? (YES) or NO

ARE YOU APPLYING FOR EXCEPTIONAL QUALITY COMPOST QUALIFICATION? YES or (NO)

IS THIS FACILITY ASSOCIATED WITH A MANURE BROKERING OPERATION? (YES) or NO

DOES THIS OPERATION HAVE A TRAINED MANURE MANAGER? YES or (NO) TRAINING DATE N/A

Section 2 – CONTACT INFORMATION

PERMIT APPLICANT James Young Jr.

ADDRESS 107 Botteaux Pl. Blythewood, SC 29016

PHONE NUMBER (WORK) 803-479-1363 (HOME) _____ (CELL/BEEPER) _____

ARE YOU THE PROPERTY OWNER OF RECORD? (YES) or NO IF NO, PROVIDE INFORMATION:

PROPERTY OWNER OF RECORD _____

ADDRESS _____

PHONE NUMBER (WORK) _____ (HOME) _____ (CELL/BEEPER) _____

OPERATOR'S NAME Same as permit Applicant

ADDRESS _____

PHONE NUMBER (WORK) _____ (HOME) _____ (CELL/BEEPER) _____

PLAN PREPARER _____

TITLE/SC REGISTRATION NUMBER _____

ADDRESS _____

PHONE NUMBER (WORK) _____ (FAX) _____ (CELL/BEEPER) _____

Section 3 – STORAGE/COMPOSTING FACILITY SEPERATION DISTANCES

SEPARATION DISTANCES:	MANURE STORAGE/COMPOSTING STRUCTURES		
	Required	SS1 Actual	SS2
POTABLE WELLS	100 feet	2402'	2077'
POTABLE WELLS OWNED BY THE APPLICANT	50 feet	310'	248'
WATERS OF THE STATE LOCATED DOWNSLOPE (including ephemeral & intermittent streams)	100 feet*	425'	350'
DITCHES OR SWALES LOCATED DOWNSLOPE	50 feet*	98'	70'
PROPERTY LINE	200 feet**	267'	459

*distance may be reduced if a vegetative water quality buffer that meets NRCS guidelines is installed and maintained.

Section 4 – PERMIT APPLICATION SUBMITTAL REQUIREMENTS

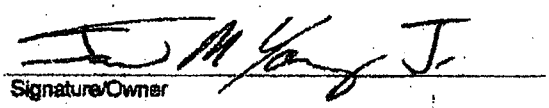
SUBMITTAL PACKAGE SHOULD INCLUDE 2 COPIES OF THE FOLLOWING ITEMS (check each item submitted):

X 1. ORIGINAL APPLICATION (and 1 copy of the original)
X 2. MANURE MANAGEMENT PLAN
   a. Animal Manure Management System Description
   b. Design Calculations and Construction Details for treatment/storage structure, including exact location and design information.
   c. Location maps (showing treatment/storage structure, and all fields)
   d. 100 year floodplain locations (treatment/storage structure may not be located in the 100-year floodplain)
X 3. ODOR ABATEMENT PLAN
X 4. VECTOR ABATEMENT PLAN
X 5. WRITTEN CONSENT FOR WAIVING OR REDUCING SETBACKS FOR TREATMENT/STORAGE STRUCTURE (if applicable)

Section 5 - CERTIFICATION

I HEREBY CERTIFY THAT ALL OPERATIONS, MAINTENANCE AND ASSOCIATED ACTIVITY PERTAINING TO THIS SITE SHALL BE ACCOMPLISHED PURSUANT TO AND IN KEEPING WITH THE TERMS AND CONDITIONS OF THE APPROVED PLANS. I HAVE READ THIS APPLICATION AND AGREE TO THE REQUIREMENTS AND CONDITIONS THAT ARE CONTAINED WITHIN. THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I HEREBY GRANT AUTHORIZATION TO THE DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL THE RIGHT OF ACCESS TO THE SITE AT ALL REASONABLE HOURS FOR THE PURPOSE OF SAMPLING AND ON SITE INSPECTIONS.

James Young Jr.
Printed Name /Owner


Signature/Owner

I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THE DESIGN IS CONSISTENT WITH THE REQUIREMENTS OF TITLE 48, CHAPTER 1 OF THE 1987 SC CODE OF LAWS, AND PURSUANT REGULATION 61-43 AND APPROPRIATE NRCS STANDARDS.

Printed Name/Plan Preparer

Signature/Plan Preparer

DHEC 2512 (08/2002)

APPLICATION INSTRUCTIONS - Agricultural Permit for Stacking Sheds & Composters

Purpose:

This form must be completed as part of an application package submitted for DHEC approval of proposed NEW or EXPANDING agricultural manure stacking shed or composter. The required items should be checked to ensure that a complete administrative package has been submitted. If a complete administrative package is not submitted, the entire project may be returned.

Item-by-Item Instructions:

Section 1 - Contact Information.
Date: Enter the date of application.
Operation Number: Leave blank, Department will assign a facility number.
New or Existing Facilities: If this application is for an existing operation that has previously obtained an agricultural permit from DHEC; indicate by circling EXISTING or NEW for new operations. If EXISTING, provide the following: *Permit Number;* Provide the permit number for the permitted operation, and *Date Issued;* Provide the date on which DHEC issued the permit. *Farm Name*: Give the name of the agricultural operation.
County: Give the county in which the operation is located.
Location: Give directions to the proposed operation from the nearest town or state road.
Application Type: Indicate whether you are applying for a permit for a stacking shed, composter, or a combination or both a stacking shed and composter. *NRCS Specifications:* Circle YES or NO to indicate if the stacking shed and/or composter meets NRCS Specifications.
Exceptional Quality Compost: Circle YES or NO to indicate whether you are applying for the manure treated at your facility to qualify as exceptional quality compost (must meet product quality standards outlined in Part 300 of R.61-43).
Manure Brokering Operations: Circle YES or NO to indicate whether this application is being submitted for a stacking shed and/or composter that is associated with a manure brokering operation.
Trained Manure Manager: Circle YES or NO to indicate whether the operator has attended the certified manure manager's training and certification class conducted by Clemson Extension Service. Indicate the date on which the certification or training was obtained.

Section 2 – Contact Information.
Permit Applicant: Enter the name, address and phone numbers for the person who is applying for the permit.
Property Owner of Record: Circle YES or NO to indicate whether the permit applicant is the property owner of record.
Enter the name, address and phone number of the person who legally owns the property on which the proposed agricultural storage/composting facility is to be located.
Operator: Enter the name, address and phone number of the person who will be responsible for the daily operation of the proposed storage/composting facility.
Plan Preparer: Enter the name of the plan preparer. *Title/SC Registration Number*: Enter the title and SC registration number (if applicable) of the person responsible for the design of the Animal Facility Management plan. *Address, Phone Number*: Enter the business address and phone numbers for the plan preparer.

Section 3 – Storage/Composting Facility Separation Distances.
Separation Distances: This table outlines the required setbacks for the manure storage and composting systems. Please enter the actual separation distance for the proposed storage/composting facility in the appropriate spaces.

Section 4 – Permit Application Submittal Requirements.
Please check each item that is being submitted as a part of this application. *All* items under Section 4 should be submitted to DHEC for review.

Section 5 – Certification.
For this section, please read the certification statements and have the appropriate person(s) sign the certification.

DHEC Processing Procedures:

Two (2) copies of the submittal package are submitted to DHEC. After Permitting, DHEC files the original in the main project file, located in DHEC's central office. DHEC sends a copy of the approved package to the appropriate EQC Region Office.

D H E C
PROMOTE PROTECT PROSPER

Standard Application Form for an Agricultural Permit for Stacking Sheds/Composters

Please Type or Print

Section 1 – FARM INFORMATION

DATE _____ OPERATION NUMBER ND N/A

NEW X OR EXISTING _____ OPERATION

IF EXISTING: PERMIT NUMBER N/A DATE ISSUED N/A

FARM NAME Jim Young Broilers

COUNTY Laurens COMMUNITY Mountville

LOCATION Lisbon Rd. Near Hwy 72 Mountville, SC 29370

APPLICATION FOR STACKING SHED _____ COMPOSTER X COMBINATION _____

DOES THE STRUCTURE MEET NRCS SPECIFICATIONS? (YES) or NO

ARE YOU APPLYING FOR EXCEPTIONAL QUALITY COMPOST QUALIFICATION? YES or (NO)

IS THIS FACILITY ASSOCIATED WITH A MANURE BROKERING OPERATION? (YES) or NO

DOES THIS OPERATION HAVE A TRAINED MANURE MANAGER? YES or (NO) TRAINING DATE N/A

Section 2 – CONTACT INFORMATION

PERMIT APPLICANT James Young Jr.

ADDRESS 107 Botteaux Pl. Blythewood, SC 29016

PHONE NUMBER (WORK) 803-479-1363 (HOME) _____ (CELL/BEEPER) _____

ARE YOU THE PROPERTY OWNER OF RECORD? (YES) or NO IF NO, PROVIDE INFORMATION:

PROPERTY OWNER OF RECORD _____

ADDRESS _____

PHONE NUMBER (WORK) _____ (HOME) _____ (CELL/BEEPER) _____

RECEIVED

OPERATOR'S NAME Same as permit Applicant

ADDRESS _____

PHONE NUMBER (WORK) _____ (HOME) _____ (CELL/BEEPER) _____

DEC 0 8 2016

Stormwater, Construction & Agricultural Permitting Division

PLAN PREPARER _____

TITLE/SC REGISTRATION NUMBER _____

ADDRESS _____

PHONE NUMBER (WORK) _____ (FAX) _____ (CELL/BEEPER) _____

Section 3 – STORAGE/COMPOSTING FACILITY SEPERATION DISTANCES

SEPARATION DISTANCES:	MANURE STORAGE/COMPOSTING STRUCTURES	
	Required	Actual
POTABLE WELLS	100 feet	1679'
POTABLE WELLS OWNED BY THE APPLICANT	50 feet	NA
WATERS OF THE STATE LOCATED DOWNSLOPE (Including ephemeral & intermittent streams)	100 feet*	959'
DITCHES OR SWALES LOCATED DOWNSLOPE	50 feet*	629'
PROPERTY LINE	200 feet**	400'

*distance may be reduced if a vegetative water quality buffer that meets NRCS guidelines is installed and maintained.

D H E C
PROMOTE PROTECT PROSPER

Standard Application Form for an Agricultural Permit for Stacking Sheds/Composters

Please Type or Print

Section 1 – FARM INFORMATION

DATE _____ OPERATION NUMBER ND N/A

NEW X OR EXISTING ____ OPERATION
IF EXISTING: PERMIT NUMBER N/A DATE ISSUED N/A

FARM NAME Jim Young Broilers
COUNTY Laurens COMMUNITY Mountville
LOCATION Lisbon Rd. Near Hwy 72 Mountville, SC 29370

APPLICATION FOR STACKING SHED ____ COMPOSTER X COMBINATION ____
DOES THE STRUCTURE MEET NRCS SPECIFICATIONS? (YES) or NO
ARE YOU APPLYING FOR EXCEPTIONAL QUALITY COMPOST QUALIFICATION? YES or (NO)
IS THIS FACILITY ASSOCIATED WITH A MANURE BROKERING OPERATION? (YES) or NO
DOES THIS OPERATION HAVE A TRAINED MANURE MANAGER? YES or (NO) TRAINING DATE N/A

Section 2 – CONTACT INFORMATION

PERMIT APPLICANT James Young Jr.
ADDRESS 107 Botteaux Pl. Blythewood, SC 29016
PHONE NUMBER (WORK) 803-479-1383 (HOME) _____ (CELL/BEEPER) _____

ARE YOU THE PROPERTY OWNER OF RECORD? (YES) or NO. IF NO, PROVIDE INFORMATION:
PROPERTY OWNER OF RECORD _____
ADDRESS _____
PHONE NUMBER (WORK) _____ (HOME) _____ (CELL/BEEPER) _____

OPERATOR'S NAME Same as permit Applicant
ADDRESS _____
PHONE NUMBER (WORK) _____ (HOME) _____ (CELL/BEEPER) _____

PLAN PREPARER _____
TITLE/SC REGISTRATION NUMBER _____
ADDRESS _____
PHONE NUMBER (WORK) _____ (FAX) _____ (CELL/BEEPER) _____

Section 3 – STORAGE/COMPOSTING FACILITY SEPERATION DISTANCES

SEPARATION DISTANCES:	MANURE STORAGE/COMPOSTING STRUCTURES	
	Required	Actual
POTABLE WELLS	100 feet	1633'
POTABLE WELLS OWNED BY THE APPLICANT	50 feet	411'
WATERS OF THE STATE LOCATED DOWNSLOPE (Including ephemeral & Intermittent streams)	100 feet*	1129'
DITCHES OR SWALES LOCATED DOWNSLOPE	50 feet*	268'
PROPERTY LINE	200 feet**	426'

*distance may be reduced if a vegetative water quality buffer that meets NRCS guidelines is installed and maintained.

Section 4 – PERMIT APPLICATION SUBMITTAL REQUIREMENTS

SUBMITTAL PACKAGE SHOULD INCLUDE 2 COPIES OF THE FOLLOWING ITEMS (check each item submitted):

X 1. ORIGINAL APPLICATION (and 1 copy of the original)

X 2. MANURE MANAGEMENT PLAN
   a. Animal Manure Management System Description
   b. Design Calculations and Construction Details for treatment/storage structure, including exact location and design information.
   c. Location maps (showing treatment/storage structure, and all fields)
   d. 100 year floodplain locations (treatment/storage structure may not be located in the 100-year floodplain)

X 3. ODOR ABATEMENT PLAN

X 4. VECTOR ABATEMENT PLAN

N/A 5. WRITTEN CONSENT FOR WAIVING OR REDUCING SETBACKS FOR TREATMENT/STORAGE STRUCTURE (if applicable)

Section 5 - CERTIFICATION

I HEREBY CERTIFY THAT ALL OPERATIONS, MAINTENANCE AND ASSOCIATED ACTIVITY PERTAINING TO THIS SITE SHALL BE ACCOMPLISHED PURSUANT TO AND IN KEEPING WITH THE TERMS AND CONDITIONS OF THE APPROVED PLANS. I HAVE READ THIS APPLICATION AND AGREE TO THE REQUIREMENTS AND CONDITIONS THAT ARE CONTAINED WITHIN. THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I HEREBY GRANT AUTHORIZATION TO THE DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL THE RIGHT OF ACCESS TO THE SITE AT ALL REASONABLE HOURS FOR THE PURPOSE OF SAMPLING AND ON SITE INSPECTIONS.

James Young Jr.
Printed Name /Owner

Signature/Owner

I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THE DESIGN IS CONSISTENT WITH THE REQUIREMENTS OF TITLE 48, CHAPTER 1 OF THE 1987 SC CODE OF LAWS, AND PURSUANT REGULATION 61-43 AND APPROPRIATE NRCS STANDARDS.

Printed Name/Plan Preparer

Signature/Plan Preparer

DHEC 2612 (08/2002)

APPLICATION INSTRUCTIONS - Agricultural Permit for Stacking Sheds & Composters

Purpose:

This form must be completed as part of an application package submitted for DHEC approval of proposed NEW or EXPANDING agricultural manure stacking shed or composter. The required items should be checked to ensure that a complete administrative package has been submitted. If a complete administrative package is not submitted, the entire project may be returned.

Item-by-Item Instructions:

Section 1 - Contact Information.
Date: Enter the date of application.
Operation Number: Leave blank, Department will assign a facility number.
New or Existing Facilities: If this application is for an existing operation that has previously obtained an agricultural permit from DHEC; indicate by circling EXISTING or NEW for new operations. If EXISTING, provide the following: *Permit Number;* Provide the permit number for the permitted operation, and *Date Issued;* Provide the date on which DHEC issued the permit. *Farm Name*: Give the name of the agricultural operation.
County: Give the county in which the operation is located.
Location: Give directions to the proposed operation from the nearest town or state road.
Application Type: Indicate whether you are applying for a permit for a stacking shed, composter, or a combination or both a stacking shed and composter. *NRCS Specifications:* Circle YES or NO to indicate if the stacking shed and/or composter meets NRCS Specifications.
Exceptional Quality Compost: Circle YES or NO to indicate whether you are applying for the manure treated at your facility to qualify as exceptional quality compost (must meet product quality standards outlined in Part 300 of R.61-43).
Manure Brokering Operations: Circle YES or NO to indicate whether this application is being submitted for a stacking shed and/or composter that is associated with a manure brokering operation.
Trained Manure Manager: Circle YES or NO to indicate whether the operator has attended the certified manure manager's training and certification class conducted by Clemson Extension Service. Indicate the date on which the certification or training was obtained.

Section 2 – Contact Information.
Permit Applicant: Enter the name, address and phone numbers for the person who is applying for the permit.
Property Owner of Record: Circle YES or NO to indicate whether the permit applicant is the property owner of record.
Enter the name, address and phone number of the person who legally owns the property on which the proposed agricultural storage/composting facility is to be located.
Operator: Enter the name, address and phone number of the person who will be responsible for the daily operation of the proposed storage/composting facility.
Plan Preparer: Enter the name of the plan preparer. *Title/SC Registration Number*: Enter the title and SC registration number (if applicable) of the person responsible for the design of the Animal Facility Management plan. *Address, Phone Number*: Enter the business address and phone numbers for the plan preparer.

Section 3 – Storage/Composting Facility Separation Distances.
Separation Distances: This table outlines the required setbacks for the manure storage and composting systems. Please enter the actual separation distance for the proposed storage/composting facility in the appropriate spaces.

Section 4 – Permit Application Submittal Requirements.
Please check each item that is being submitted as a part of this application. *All* items under Section 4 should be submitted to DHEC for review.

Section 5 – Certification.
For this section, please read the certification statements and have the appropriate person(s) sign the certification.

DHEC Processing Procedures:

Two (2) copies of the submittal package are submitted to DHEC. After Permitting, DHEC files the original in the main project file, located in DHEC's central office. DHEC sends a copy of the approved package to the appropriate EQC Region Office.

1.3. Preliminary Site Approval for Poultry barns, Stacking Shed, and Composter

D H E C

PROMOTE PROTECT PROSPER

Catherine E. Heigel, Director

[illegible]

May 19, 2016

Mr. Jim Young
107 Batteaux Place
Blythewood, SC 29016

RE: Preliminary Site Approval for 2 Stacking Sheds and a Composter
Location: Take Lisbon Rd (SR49) Northwest from Hwy 72. Proposed site is 0.5 mi. on the right.
County: Laurens

Dear Mr. Young:

The following information concerns a preliminary site investigation that was conducted on **April 13, 2016** and map received on May 19, 2016 in regards to the placement of 2 stacking sheds and a composter at the proposed facility. All requirements relevant to this type of disposal contained in part 200 of Regulation 61-43, "Standards for the Permitting of Agricultural Animal Facilities", must be met. The site that you have chosen is located on the Northeast side of the proposed houses. This site appears to be suitable for a composter and stacking sheds. Permission is granted for you to proceed with the planning and design of this system.

Please be aware that additional buffer zone requirements may be required on a case-by-case basis. Also, in handling of the manure, you should consider minimizing potential nuisances such as odor, flies, etc. However, if nuisances occur, you will need to correct them in the shortest time frame possible.

In designing your system, you should keep in mind future environmental concerns such as possible growth and non-point source pollution.

This site approval will expire on **April 13, 2017.**

If you have any questions, please do not hesitate to contact me at (864) 227-5915.

Sincerely,

Chrissy Matthews

Chrissy Matthews
Upstate EQC Region – Greenwood

Cc: DHEC- Agricultural Waste Permitting Section
Agri-Waste Technology, Inc. (AWT)

D H E C

PROMOTE PROTECT PROSPER

Catherine E. Heigel, Director

Promoting and protecting the health of the public and the environment

April 13, 2016

Mr. Jim Young
107 Batteaux Place
Blythewood, SC 29016

RE: Preliminary Site Approval for 8 Broiler Houses
Location: Take Lisbon Rd(SR49) Northwest from Hwy 72. Proposed site is 0.5 mi. on the right.
County: Laurens

Dear Mr. Young:

The following information concerns a preliminary site investigation that was conducted on April 13, 2016 to discuss your proposed broiler facility. All requirements relevant to this type of operation contained in part 200 of Regulation 61-43, "Standards for the Permitting of Agricultural Animal Facilities", must be met before an Animal Feeding Operation Permit is issued. The site that you have chosen appears to be suitable for this type of operation. Permission is granted for you to proceed with the planning and design of your system.

In order to obtain an Animal Feeding Operation Permit or authorization to operate one, the following information is required:

1. Two copies of a **Waste Management Plan** and a signed **Standard Application Form for Agricultural Animal Facilities** - *Animal Facilities other than Swine* (DHEC form #3580) must be submitted. The waste management plan must be prepared by an engineer licensed to practice in South Carolina or it may be prepared by the Natural Resource Conservation Service.

2. A statement that the owner(s) will be responsible for operating and maintaining the waste management system in accordance with design criteria.

3. Provide Tax maps that identify the location of the proposed barn(s) and all property owners within ¼ mi. and the land use (residential, cropland, business, church, etc.). Please **NOTE** that the Department requires that the proposed animal houses are located at least 1000 feet from any inhabited residences. However, this distance requirement may be reduced with written consent from the owner of the dwelling.

4. Regulation 61-43 requires that you must notify all property owners within ¼ mi. of your proposed facility's footprint of your intent to build an agricultural facility. Proof of notification of all property owners whose property line is within ¼ mi. of the proposed facility's footprint. A signed Notice of Intent Form (DHEC form # 3579) or a certified mail card is sufficient.

5. Check for the application fee of $165 made payable to **DHEC's Bureau of Finance**.

6. Any animal or drinking water wells installed at this site must be located at least 50 feet from the broiler houses.

Upon receipt of the items above, we will promptly proceed with our review. **This site approval will expire on April 13, 2017.**

In designing your waste handling practices, you should keep in mind future environmental considerations, such as non-point source pollution and your growth plans. Please consider minimizing potential nuisances such as odors, flies, etc. If nuisances do occur, they will need to be corrected in the shortest time frame possible.

Please note that construction of this facility must not be initiated prior to receiving a Permit from this Department. Once the facility is constructed, no animals may be put into the facility prior to the SC DHEC Regional Office issuing written authorization to place the facility into operation. Failure to adhere to these requirements may result in an enforcement action.

If you have any questions, please do not hesitate to call me at (864) 227-5915.

Sincerely,

Chrissy Matthews

Chrissy Matthews
Upstate EQC Region – Greenwood

Cc: DHEC- Agricultural Waste Permitting Section

1.4. Litter Sampling

Litter Analysis
The producer shall be responsible for having representative samples of the manure collected and analyzed at least once per year and when the feed composition significantly changes. The amount of manure to be land applied so that the permitted application rate (normally the agronomic rate) is met will be determined using a rolling average of the previous analyses. The documentation must be maintained for at least eight years, longer if it relates to a USDA program. These analyses are part of the required Record Keeping and are stored under the Record Keeping element of this CNMP.

Obtaining a representative sample is one of the most important tasks in manure management because application rates are based on the concentration of nutrients in the manure. Samples should be taken as close as possible to the time of application. If several weeks elapse between sampling and land application, or if the manure is altered by rainfall or manure additions, another sample should be obtained. To take a representative sample, obtain a quart of manure from 15 to 20 locations in the pile or lagoon and place in a large clean plastic bucket. Mix this bulk sample thoroughly, and then place about a quart in a clean plastic bag or bottle. Seal tightly, but leave room for the sample to expand. Keep the sample cool. If the sample is not mailed to the laboratory on the same day it is sampled, it should be refrigerated.

Guidelines for analysis and application of manure may be obtained from Clemson Extension's EC 673, 1996, "Land Application of Animal Manure" (http://www.clemson.edu/psapublishing/pages/waste/EC673.PDF).

1.5. Existing Waste Management or Nutrient Management Plans

This CNMP will be the first waste management plan for this farm.

1.6. Operator or manager certifications:

Certified Animal Manure Manager (CAMM): James Young Jr.
Certificate Number: To be certified within a year of receiving permit

1.7. Notice(s) of Public Intent

Notices of Intent are included in Attachment A..

1.8. Waivers (Neighboring Landowners)

Setback waivers are included in Attachment B.

1.9. Manure Application Agreements

Spreading agreements are included in Attachment C.

1.10. Natural Resource Concerns

If checked, the indicated resource concerns have been identified and have been addressed in this plan.

Soil Quality Concerns

	Soil Quality Concern	*Activities to Address Concern*
✓	None	

Water Quality Concerns

	Water Quality Concern	*Activities to Address Concern*
✓	None	

Other Concerns Addressed

	Other Concern	*Activities to Address Concern*
✓	Regulations	Plan Required by DHEC
✓	Litter Storage	Planned Stacking Shed
✓	Mortality Management	Planned Composter

Section 2. Manure and Wastewater Handling and Storage

2.1. Map(s) of Production Area

AWT
Engineers and Soil Scientists
Agri-Waste Technology, Inc.
501 N. Salem St., Suite 203
Apex, NC 27502
P: 919.829.9909
www.agriwaste.com

Headquarter
Topographic Map

James Young-Laurens Co., SC
511-00-00/069

The current property line is drawn in yellow. James will purchase a portion of 511-00-00/069. The proposed property split is shown with a red dotted line.

RECEIVED
NOV 07 2016
Stormwater, Construction & Agricultural Permitting Division

Drawn By: Julie Davidson
Reviewed By: Chris Mosley
Date: 11/3/16

*** This map was created for proposed planning purposes only. It is not intended to be used as a plat or survey map of any type.***

1517

Agri-Waste Technology, Inc.
501 N. Green St., Suite 203
Apex NC 27502
P: 919.057.0380
www.agriwaste.com

Planned Headquarters
Topographic Map

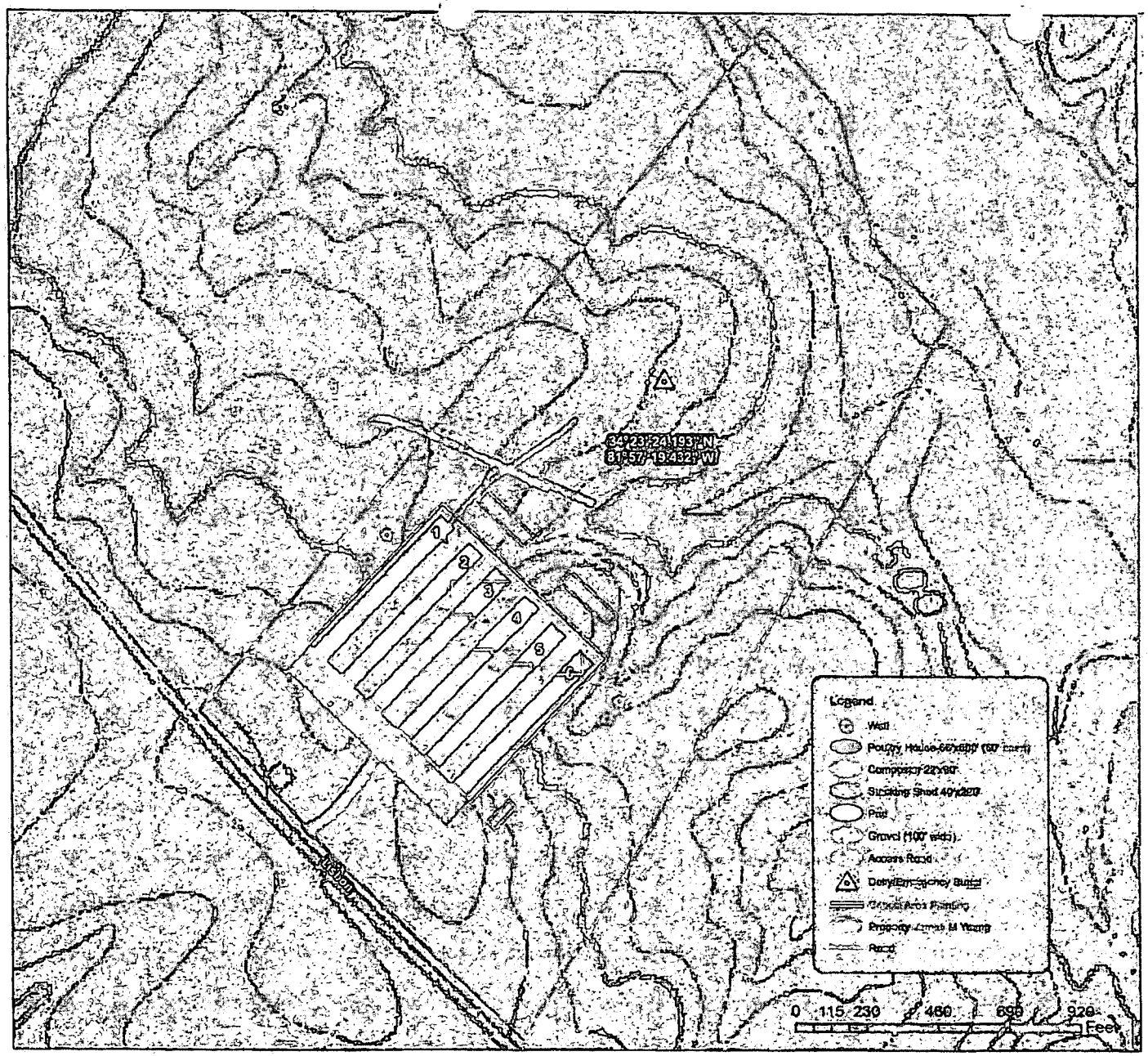
James M. Young
Laurens Co., SC

IMPORTANT NOTES

Stacking sheds and composter will be built at a later date when plans and specifications have been approved. The structures are shown on this map because a SCDHEC preliminary site inspection has been completed. Also, they are shown to justify their locations meet NRCS and SCDHEC requirements.

Furthermore, these structures have been sited according to the barn size and the litter management for this farm.

Drawn By: Julie Davidson
Reviewed By: Chris Nesley
Date: 08/16



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DHEC_003210

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AWT
Engineers and Soil Scientists

AgriWaste Technology Inc.
804 N. Arbor St. Suite 203
Apex, NC 27502
P: 919.387.0809
www.AgriWasteTech.com

Headquarter Map

James Young
Laurens Co., SC
511-00-00-009

IMPORTANT NOTES

Stacking sheds and composter will be built at a later date when plans and specifications have been approved. The structures are shown on this map because a SCDHEC preliminary site inspection has been completed. Also, they are shown to justify their locations meet NRCS and SCDHEC requirements.

Furthermore, these structures have been sized according to the barn size and the litter management for this farm.

RECEIVED
NOV 07 2016
Stormwater, Construction & Agricultural Permitting Division

Drawn By: Julie Davidson
Reviewed By: Chris Mosley
Date: 11/3/16

*** This map was created for proposed planning purposes only. It is not intended to be used as a plat or survey map of any type.***

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AWT
Agronomic and Soil Services

Agri-Waste Technology, Inc.
201-C Salem St. Suite 203
Apex, NC 27502
P: 919.662.0476
www.agriwaste.com

Planned Headquarters Crop

James M. Young
Laurens Co., SC

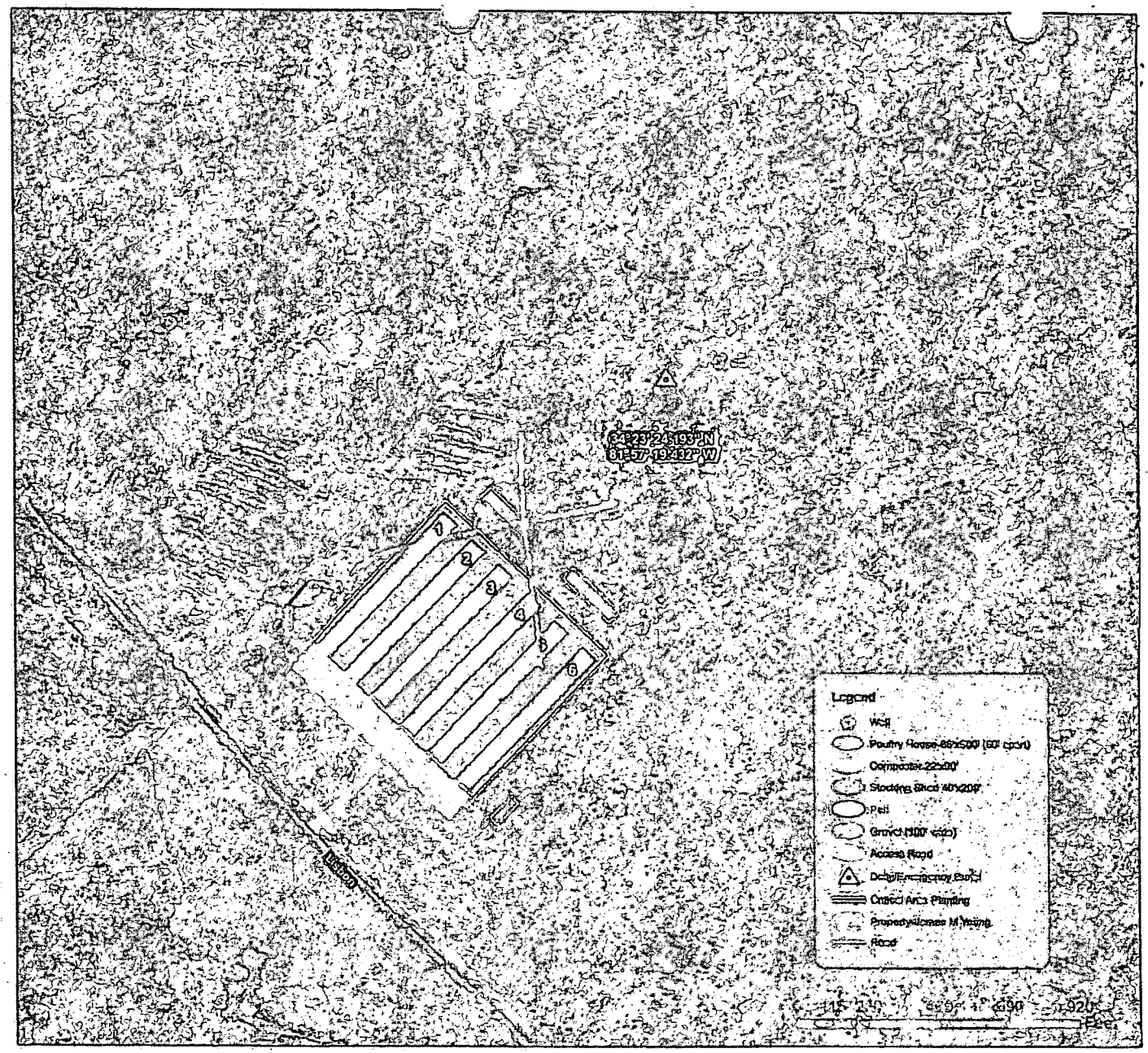
N

IMPORTANT NOTES

Stocking sheds and composter will be built at a later date when plans and specifications have been approved. The structures are shown on this map because a SCDHEC preliminary site inspection has been completed. Also, they are shown to justify their locations meet NRCS and SCDHEC requirements.

Furthermore, these structures have been sized according to the farm size and the litter management for this farm.

Drawn By: Julia Davidson
Reviewed By: Chris Mosley
Date: 8/2015



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DHEC_003212

*** This map was created for proposed planning purposes only. It is not intended to be used as a plat or survey map of any type.***

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DHEC_003213

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Agri-Waste Technology, Inc.
501 N. Salem St., Suite 202
Apex, NC 27502
P: 919.859.1999
www.agriwaste.com

Planned Headquarter Flood Map

James M. Young
Laurens Co., SC

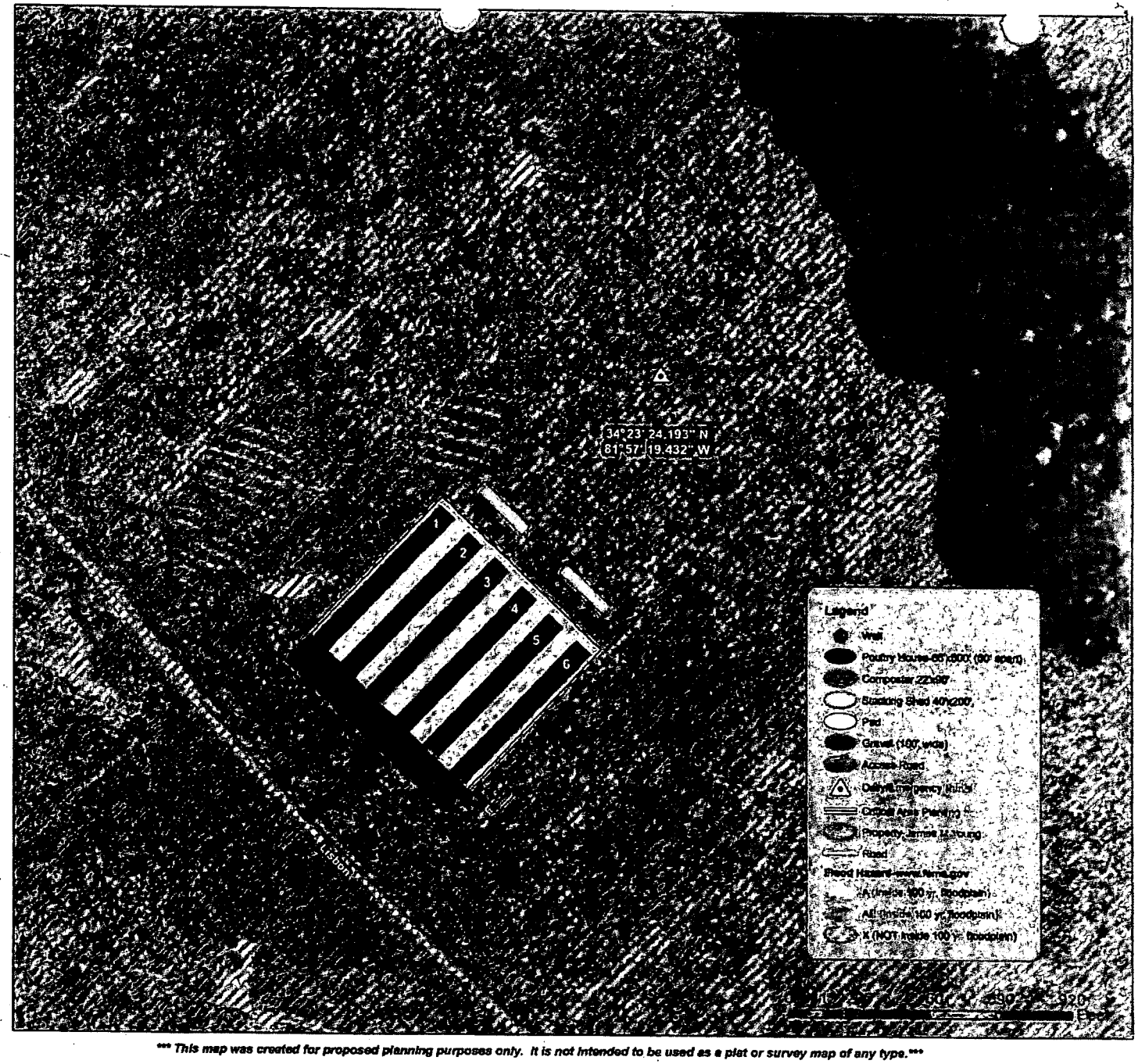
N

IMPORTANT NOTES:

Stacking sheds and composter will be built at a later date when plans and specifications have been approved. The structures are shown on this map because a SCDHEC preliminary site inspection has been completed. Also, they are shown to justify their locations meet NRCS and SCDHEC requirements.

Futhermore, these structures have been sized according to the barn size and the litter management for this farm.

Drawn By: Julie Davidson
Reviewed By: Chris Mosley
Date: 6/8/16



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DHEC_003214

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AWT
Engineering Soil Evaluation
Ag-Waste Technology, Inc.
697 E. Butler Rd., Suite 63, Greenville, SC 29607
Phone: (864) 297-0202
Fax: (864) 297-0203
awt@agwaste.com

Headquarter Bulls Map

James Young
Laurens Co., SC
511-00-00-009

IMPORTANT NOTES

Stacking sheds and composter will be built at a later date when plans and specifications have been approved. The structures are shown on this map because a SCDHEC preliminary site inspection has been completed. Also, they are shown to justify their locations meet NRCS and SCDHEC requirements.

Furthermore, these structures have been sized according to the barn size and for farm management for the farm.

RECEIVED
NOV 07 2016
Soil & Water Conservation & Agricultural Permitting Division

Drawn By: Julie Dickson
Reviewed By: Chris Valley
Date: 11/2/16

*** This map was created for proposed planning purposes only. It is not intended to be used as a plat or survey map of any type. ***

1523

DHEC_003215

1523

AWT
Engineering and Soil Scientists
Agri-Waste Technology, Inc.
911 N. Dekalb St., Suite 209
Apex NC 27502
P: (919) 362-8000
www.agriwaste.com

Planned Headquarter Soils Map

James M. Young
Laurens Co., SC

N

IMPORTANT NOTES

Stacking sheds and compactor will be built at a later date when plans and specifications have been approved. The structures are shown on this map because a SCDHEC preliminary site inspection has been completed. Also, they are shown to justify their locations meet NRCS and SCDHEC requirements.

Furthermore, these structures have been sized according to the barn size and the litter management for this farm.

Drawn By: Julie Davidson
Reviewed By: Chad Mosley
Date: 6/2/16

*** This map was created for proposed planning purposes only. It is not intended to be used as a plat or survey map of any type.***

1524

DHEC_003216

1524

AWT
Engineers and Soil Scientists

Agri-Waste Technology, Inc.
601 N. Salem St. Suite 202
Apex, NC 27502
P/919.xxx.xxxx
www.agriwaste.com

Headquarter Location Map

James Young Laurens Co., SC
511-00-00-009

IMPORTANT NOTES

1.) Poultry houses/stacking shed/Composter do not impact the 1,000' permanent residence buffer. No waivers are needed. These are shown as orange circles.

2.) Poultry houses/stacking shed/composter are inside the 400' from the property line buffer (yellow shaded area).

3.) Poultry houses/stacking shed/composter are more than 100' from surface water.

4.) Poultry houses/stacking shed/composter are more than feet from wetlands (delineated by AWT).

5.) Planned poultry houses are more than 200' from neighbor's walls. Neighbors well is assumed to be 100' from residence (orange circle).

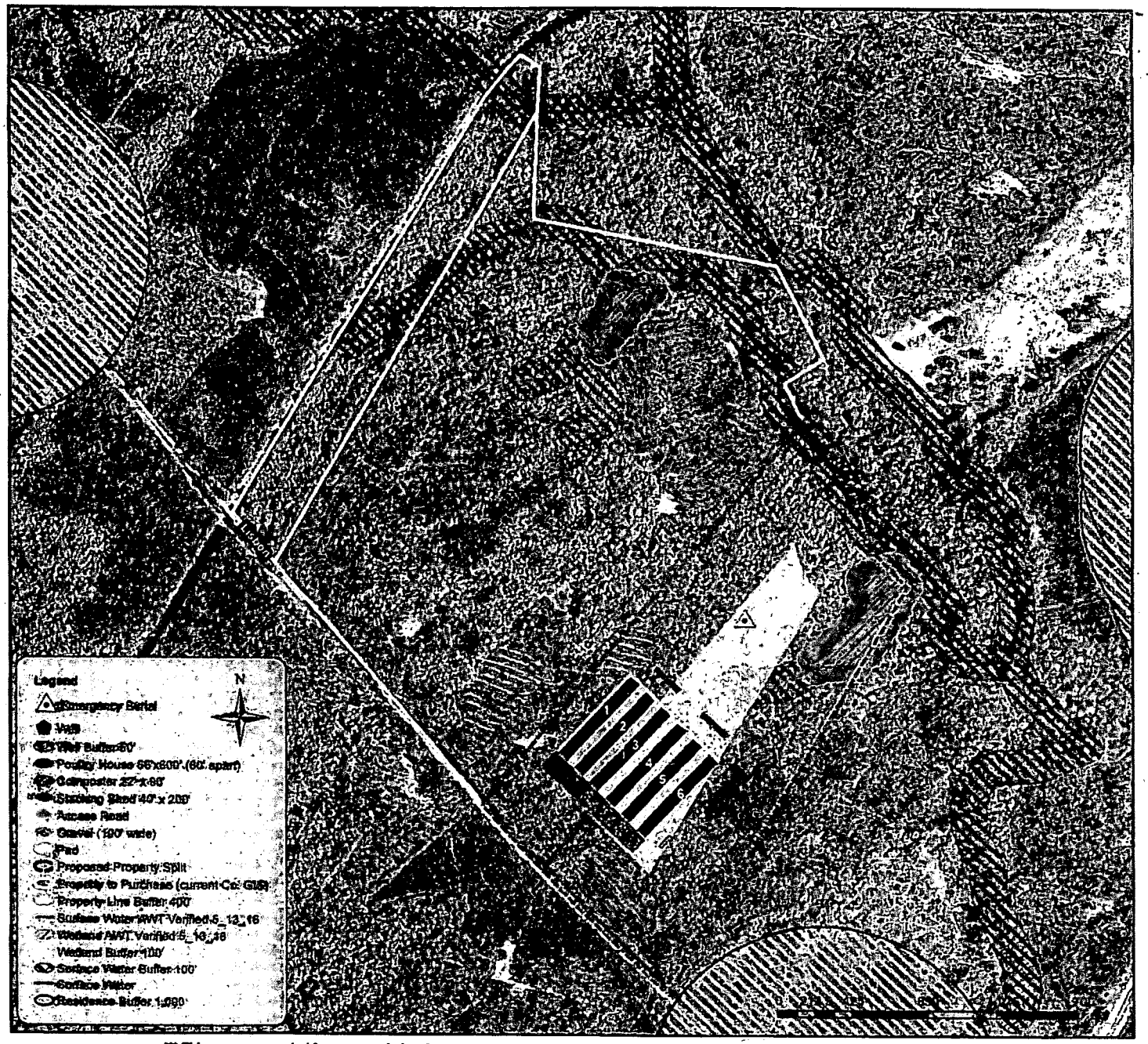
6.) Poultry houses are 66' x 600' 60' feet apart and 557' from Lisbon Rd.

7.) Composter is 22' x 60'

8.) Stacking sheds are 116' from poultry houses and composters & 100' from houses.

9.) The emergency burial is held by the same requirements as the other structures. This emergency burial site meets all requirements as discussed in items 1-8 above.

Drawn By Julie Davidson
Reviewed By Chris Mosley
Date 10/3/16



*** This map was created for proposed planning purposes only. It is not intended to be used as a plat or survey map of any type.***

1525

DHEC_003217

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AWT

Engineering and Site Planning

Agri-Waste Technology, Inc.
811 A Salem St. Suite 203
Apex, NC 27502
Ph 919.387.0808
www.agriwaste.com

Planned Headquarter Location Map

James M. Young-Laurens Co., SC

IMPORTANT NOTES

1.) Poultry houses/stacking shed/composter do not impact the 1,000' permanent residence buffer. No waivers are needed. These are shown as orange circles.

2.) Poultry houses/stacking shed/composter are closer than 400' from the property line (yellow shaded area). 1- 400' property line waiver will be needed from Heath Coggins tax 510-00-00-009.

3.) Poultry houses/stacking shed/composter are more than 100' from surface water.

4.) Poultry houses/stacking shed/composter are more than 100' from wetlands (delineated by AWT).

5.) Planned poultry houses are more than 200' from neighbor's wells. Neighbors' wells are assumed to be 100' from residence (orange circle).

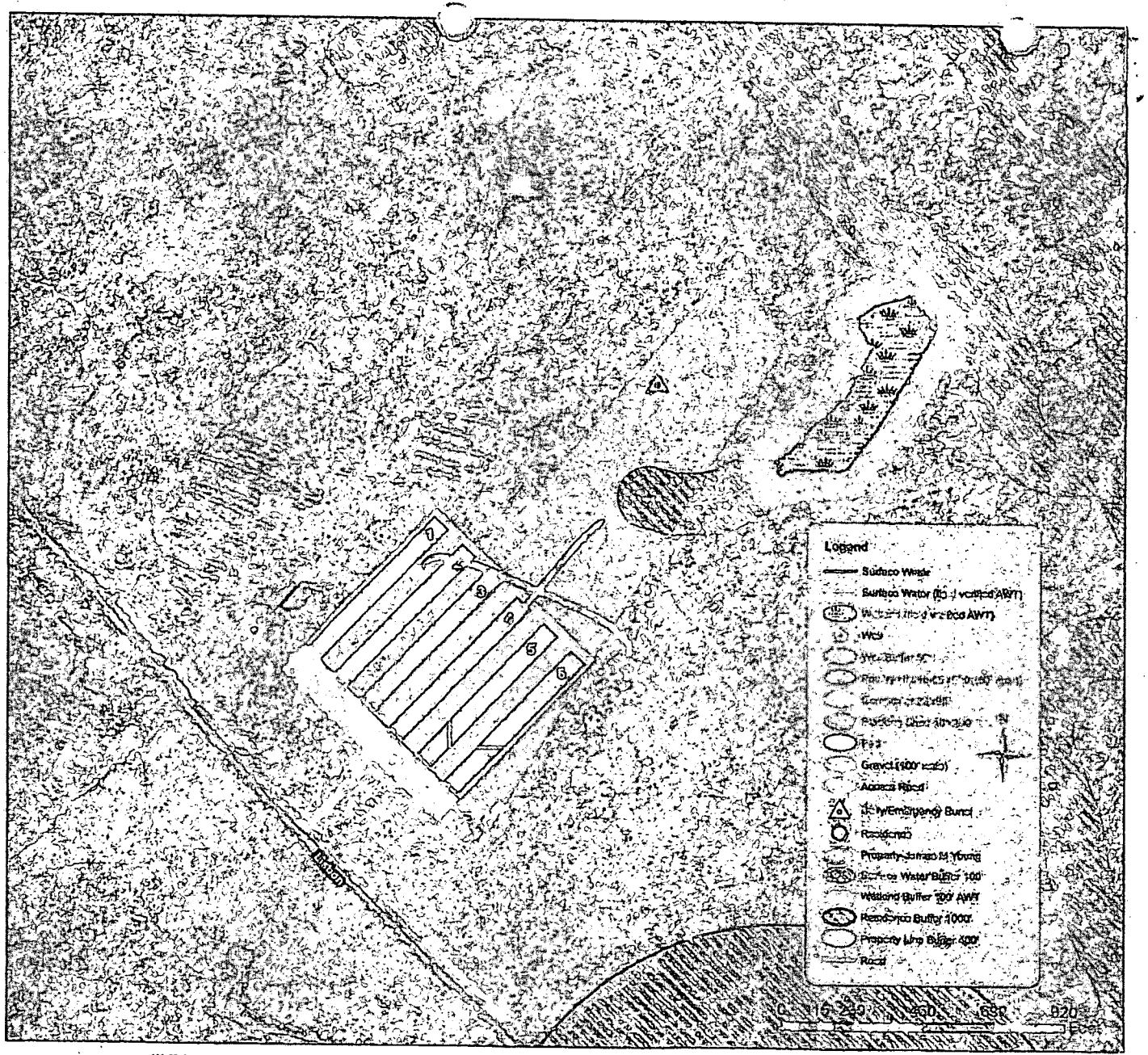
6.) Poultry houses are 66' x 600' and 60 feet apart.

7.) Composter is 22' x 80' and 108' from poultry house.

8.) Stacking shed are 118' from poultry house.

9.) The emergency burial is held by the same requirements as the poultry house/stacking shed/ composter. This emergency burial meet all requirements as discussed in items 1-5 above.

Drawn By: Julie Davidson
Reviewed By: Chris Mosley
Date: 6/8/15



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DHEC_003218

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*** This map was created for proposed planning purposes only. It is not intended to be used as a plat or survey map of any type.***

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DHEC_003219

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*** This map was created for proposed planning purposes only. It is not intended to be used as a plat or survey map of any type.***

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DHEC_003220

AWT
Engineers and Soil Scientists

Agri-Waste Technology, Inc.
50 Hwy. 70 Bypass, Suite 102
Apex, NC 27523
P: (919) 362-8800
www.agriwaste.com

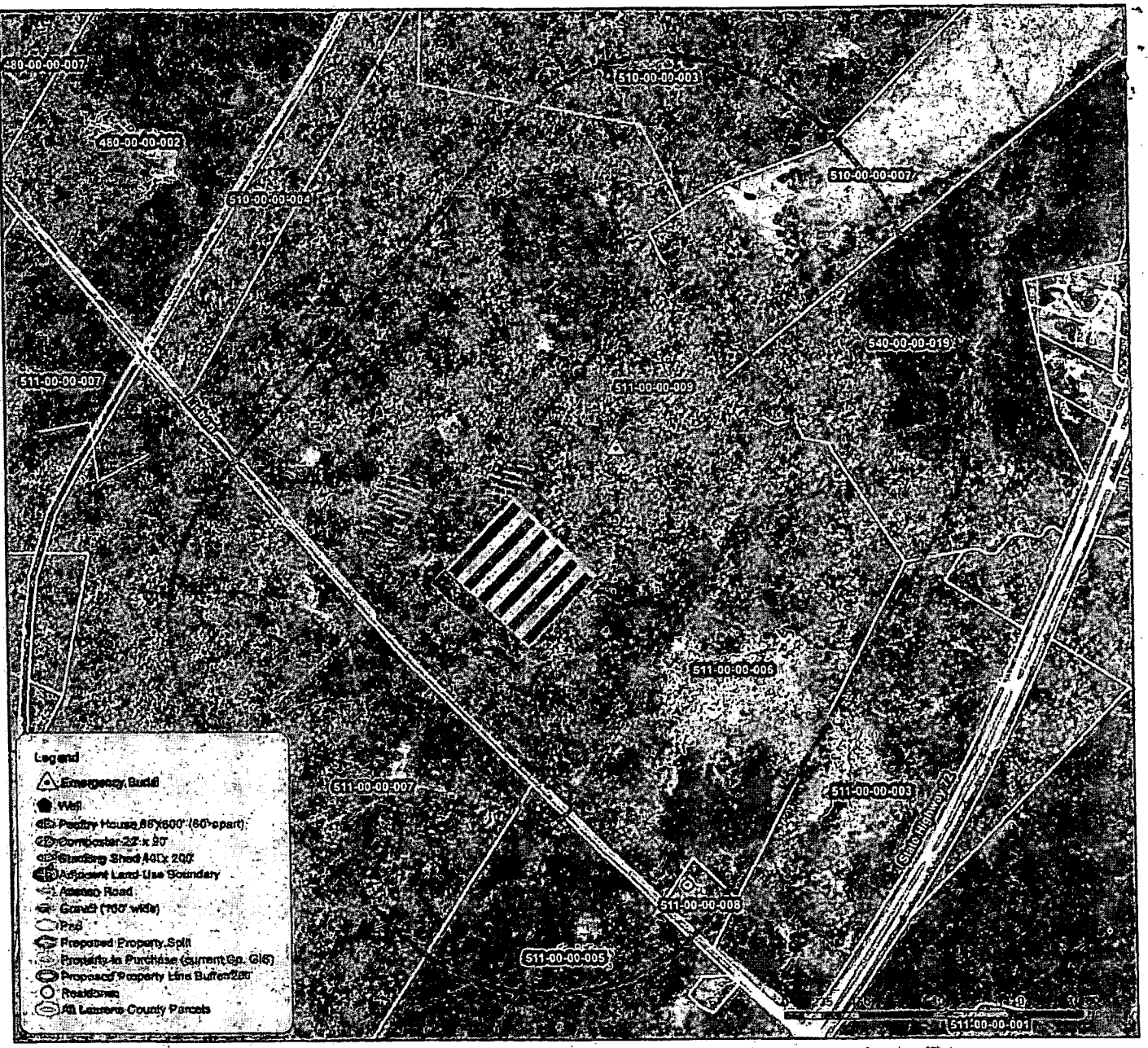
Adjacent Land Use Map

James Young
Laurens Co., SC
511-00-00-009

The current property line is drawn in yellow. James will purchase a portion of 511-00-00-009. The proposed property split is shown with a red dotted line.

RECEIVED
NOV 07 2016
Laurens County Planning & Development

Drawn By: Julie Davidson
Reviewed By: Chris Mosley
Date: 11/3/16



*** This map was created for proposed planning purposes only. It is not intended to be used as a plat or survey map of any type.***

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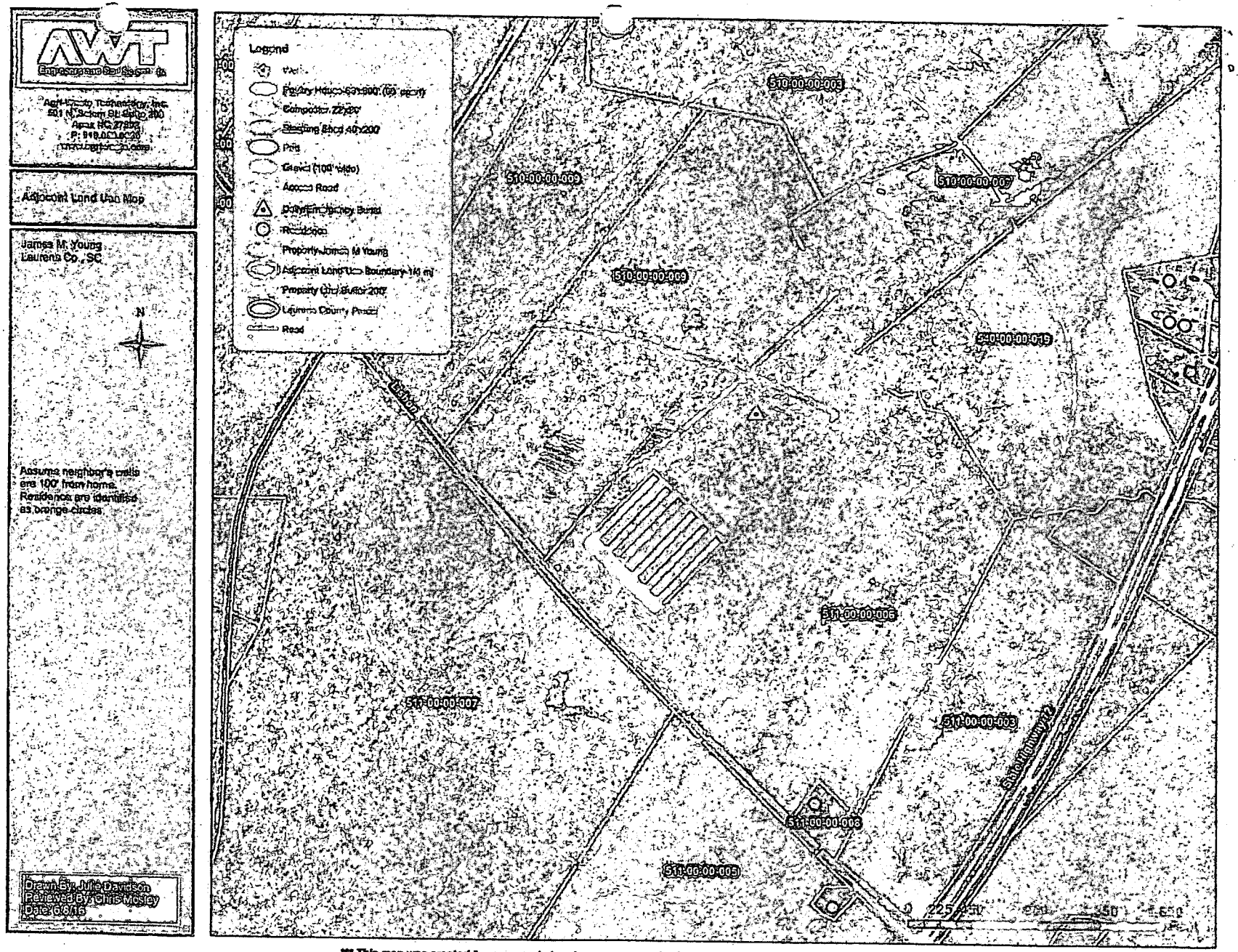

*** This map was created for proposed planning purposes only. It is not intended to be used as a plat or survey map of any type.***

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DHEC_003222

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2.2. Production Area Conservation Practices

A list and description of the planned and existing conservation practices to addresses the resource concerns and producer goals is included. In addition to the listing of the conservation practices, amount and year of installation, a description of the operation and maintenance are included.

All NRCS conservation practices shall be installed, operated and maintained according to NRCS conservation practice standards and associated technical specifications.

Practice and Facility Management Plan

Planned Practices	Amount	Planned Year of Installation
Critical Area Planting (342)	1.46 ac	2016
Animal Mortality Facility 316 - Burial	1	2016
Animal Mortality Facility 316 - Composter	22' X 90'	2017
Waste Storage Facility 313 – Stacking Shed	2 X 40' X 200'	2017

Operation & Maintenance

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

This practice may be applied as part of a conservation management system to support one or more of the following purposes:

- Decrease non-point source pollution of surface and groundwater resources
- Reduce the impact of odors that result from improperly handled animal mortality
- Decrease the likelihood of the spread of disease or other pathogens that result from the interaction of animal mortality and predators
- To provide contingencies for normal and catastrophic mortality events

Waste Storage Facility (313)
A waste storage impoundment made by constructing an embankment and/or excavating a pit or dugout, or by fabricating a structure.

To temporarily store wastes such as manure, wastewater, and contaminated runoff as a storage function component of an agricultural waste management system.

Stacking Shed

1. Fires can develop in stacked poultry litter through spontaneous combustion. Special precautions should be taken to prevent this from happening.
2. Pile height should not exceed 5 feet. Storing the material in separate small windrows reduces the cross sectional area and is the safest option for stacking.
3. KEEP THE LITTER DRY! Do not wet the litter in the hope of preventing a fire; just the opposite may occur. In addition, protect the litter from blowing rain.
4. Avoid placing the wet material in contact with dry material. Do not layer new litter on top of old, and do not let dead poultry compost come into contact with stored litter.
5. Do not compact the material by driving over it or packing it with equipment.
6. If litter is stored against wooden walls, limit the litter height to 4 feet.
7. Monitor temperatures at different points in the pile frequently. If temperatures exceed 190°F, or if the material is smoldering, prepare to remove material from the building. This includes notifying the local fire department to be on hand. A smoldering pile could burst into flames if exposed to air. A garden hose could be inadequate to extinguish the fire.
8. Do not store equipment in the litter storage structure.
9. At least twice per year, when the facility is empty, inspect wooden parts, hardware, or other replaceable parts that are damaged or show excessive wear or decay.
10. All disturbed areas around the facilities should be vegetated or covered with gravel to prevent erosion.
11. Warning signs, fences, guardrails, and other safety features will be installed and maintained to prevent unauthorized entry to any structure.

Critical Area Planting (342)

Establish permanent vegetation on sites that have or are expected to have high erosion rates, and on sites that have physical, chemical or biological conditions that prevent the establishment of vegetation with normal practices.

- Stabilize areas with existing or expected high rates of soil erosion by water.
- Stabilize areas with existing or expected high rates of soil erosion by wind.
- Restore degraded sites that cannot be stabilized through normal methods.

Plan for Establishing Vegetation

Vegetation establishment is required around the buildings and storage structures to reduce soil erosion, this offsite nutrient and pathogen transport.

All disturbed areas including slopes of pads will be planted to permanent vegetation. If construction is during seasons not suited for planting warm or cool season grasses, temporary vegetation will be established until the recommended planting dates. The following specifications will be used to establish the grasses.

- Lime at rate of 1.5 tons per acre
- Fertilize at rate of 100 units of Nitrogen, Phosphorus, and Potassium per acre
- Mulch slopes greater that 4 to 1
- For planting dates from 1 September to 15 December
  - 40 lbs. fescue per acre
  - 10 lbs. unhulled Bermuda grass per acre
  - 10 lbs. of wheat per acre
- For planting dates from 1 March to 30 June
  - 10 lbs. of Bermuda grass per acre
  - 10 lbs. of Bahaia grass per acre
  - 10 lbs. of Browntop millet per acre

2.3. Manure Storage

Storage ID	Type of Storage	Pumpable or Spreadable Capacity	Annual Manure Collected	Maximum Days of Storage
Broiler Houses	In-house litter storage	1,741 Tons	1,449 Tons	439
Stacking Shed 1	Poultry manure dry stack	550 Tons	0 Tons	
Stacking Shed 2	Poultry manure dry stack	550 Tons	0 Tons	

2.4. Animal Inventory

Animal Group	Type or Production Phase	Number of Animals	Average Weight (Lbs)	Confinement Period	Manure Collected (%)	Storage Where Manure Will Be Stored
Broilers	Broiler	237,600	4.55	Jan Early - Dec Late	100	Broiler Houses

(1) Number of Animals is the average number of animals that are present in the production facility at any one time.

2.5. Normal Animal Mortality Management

To decrease non-point source pollution of surface and ground water resources, reduce the impact of odors that result from improperly handled animal mortality, and decrease the likelihood of the spread of disease or other pathogens, approved handling and utilization methods shall be implemented in the handling of normal mortality losses. If on-farm storage or handling of animal mortality is done, NRCS Standard 316, Animal Mortality Facility, will be followed for proper management of dead animals.

Plan for Proper Animal Mortality Management

The following narrative describes how normal animal mortality will be managed in a manner that protects surface and ground water quality.

Burial

Dig a large pit or trench as located on the plan map. Insert dead animals daily, and cover them with one to two feet of soil.

The pit should be graded so that it does not impound water. Runoff from the pit should flow into a grass filter. Note: When adequate drainage is not provided, these pits or trenches fill with water and carcasses may actually float to the surface. The water in the pit is very bacteria-laden and may be a hazard to both animal and human health. There is also high potential for ground water contamination from both bacteria and nutrients.

Burial trenches and pits must have at least a 2.0 foot separation between the bottom of the trench and groundwater.

The pits should also have a berm to divert rainfall and runoff from the site. The soil should be able to infiltrate any rainfall that falls directly into the pit.

Vectors (dogs, rats, snakes, flies, etc.) are potential problems in a burial situation. If a producer chooses this method for disposal of dead animals, the carcasses must be covered daily as to reduce vectors in and around the trench or pit.

When a burial pit is full, the site should be capped with a mound of soil so that precipitation is not allowed to collect in the closed pit. Also, the area should be grassed as to prevent erosion. The burial area should be monitored so that these conditions remain after settling of decomposing carcasses and capping material.

Composting

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

Recipe for composting broiler mortality

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

Compost layering procedure

a. The first layer is one foot of litter.

b. A 4-6 inch layer of carbon amendment (sawdust is preferred) is added according to the recipe

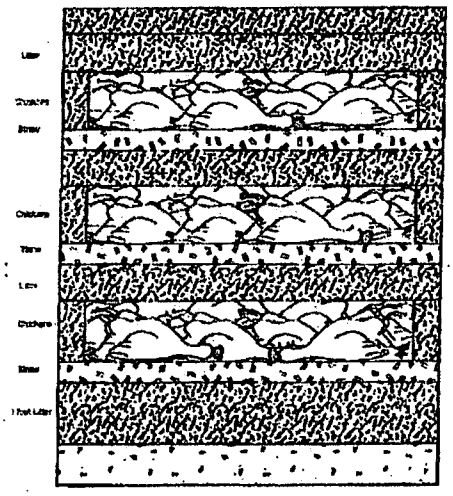
c. A layer of carcasses is added. Carcasses shall be laid side-by-side and shall not be stacked on top of one another. Carcasses placed directly on dirt or concrete floors, or against bin walls will not compost properly.

d. Water is added (uniform spray).

e. Carcasses are covered with a 6-inch layer of litter.

f. Next layer of carcasses begun with carbon amendment and above steps repeated.

g. When composter is full, cap the 6-inch layer with four additional inches.



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

Temperature is the primary indicator to determine if the composting process is working properly. A minimum temperature of 130 ₀F shall be reached during the composting process. A temperature of 140 ₀F is optimum; however, temperatures may range up to 160 ₀F. If the minimum temperature is not reached, the resulting compost shall be incorporated immediately after land application or recomposted by turning and adding moisture as needed. Compost managed at the required temperatures will favor destruction of any pathogens and weed seeds.

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

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

material does not reach operating temperature, investigate piles for moisture content, porosity, and thoroughness of mixing.

After this first stage process, the material should be turned into a second bin and allowed to go through a second heat process. For larger birds, especially turkeys, a third turning may be necessary for complete degradation of the birds. Typically, the process can be considered "done" within 21-28 days from the time the compost is filled for broilers. For turkeys, the process usually requires about 60 days. After the heat process, curing period of one to three months is usually required before the material is stable.

Compost may be land applied after the secondary or tertiary composting. If any animal parts are still in the mix, the material must be incorporated. If immediate application is not possible the material should be stored using the same requirements as that of stored litter in the Stacking Shed O&M statement. Inspect compost structure at least twice annually when the structure is empty. Replace any broken or badly worn parts or hardware. Patch concrete floors and curbs as necessary to assure water tightness. Examine roof structures for structural integrity and leaks. Inspections shall be documented on the attached worksheet.

2.6. Planned Manure Exports off the Farm

Month-Year	Manure Source	Amount	Receiving Operation
Mar 2017	Stacking Shed 1	336 Tons	L & M Litter Brokers
Nov 2017	Broiler Houses	150 Tons	L & M Litter Brokers
Nov 2017	Stacking Shed 2	550 Tons	L & M Litter Brokers
Apr 2018	Broiler Houses	224 Tons	L & M Litter Brokers
Apr 2018	Stacking Shed 1	550 Tons	L & M Litter Brokers
Sep 2018	Stacking Shed 2	450 Tons	L & M Litter Brokers
Mar 2019	Stacking Shed 1	300 Tons	L & M Litter Brokers
Aug 2019	Stacking Shed 2	405 Tons	L & M Litter Brokers
Jan 2020	Broiler Houses	112 Tons	L & M Litter Brokers
Jan 2020	Stacking Shed 1	550 Tons	L & M Litter Brokers

2.7. Planned Manure Imports onto the Farm

Month-Year	Manure's Animal Type	Amount	Originating Operation	Location

(None)

2.8. Planned Internal Transfers of Manure

Month-Year	Manure Source	Amount	Manure Destination
Jun 2016	Broiler Houses	549 Tons	Stacking Shed 1
Sep 2016	Broiler Houses	95 Tons	Stacking Shed 1
Dec 2016	Broiler Houses	549 Tons	Stacking Shed 2
Mar 2017	Broiler Houses	95 Tons	Stacking Shed 1
May 2017	Broiler Houses	549 Tons	Stacking Shed 1
Aug 2017	Broiler Houses	95 Tons	Stacking Shed 2
Nov 2017	Broiler Houses	399 Tons	Stacking Shed 2
Jan 2018	Broiler Houses	95 Tons	Stacking Shed 1
Apr 2018	Broiler Houses	326 Tons	Stacking Shed 1
Jul 2018	Broiler Houses	95 Tons	Stacking Shed 2
Sep 2018	Broiler Houses	549 Tons	Stacking Shed 2
Dec 2018	Broiler Houses	95 Tons	Stacking Shed 1
Mar 2019	Broiler Houses	549 Tons	Stacking Shed 1
May 2019	Broiler Houses	95 Tons	Stacking Shed 2
Aug 2019	Broiler Houses	549 Tons	Stacking Shed 2
Nov 2019	Broiler Houses	95 Tons	Stacking Shed 1
Jan 2020	Broiler Houses	437 Tons	Stacking Shed 1
Apr 2020	Broiler Houses	95 Tons	Stacking Shed 2

(1) 95 ton events are crustings.

Section 3. Farmstead Safety and Security

3.1. Emergency Action Plan

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

1. **Threatening Natural Occurrences**
   Prevent or minimize damage caused by threatening natural occurrences, such as hurricanes or strong storms associated with approaching fronts - actions include:

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

2. **Personal Injury**

   a. Stop all other activities to deal with the emergency.
   b. Call for help (See Table below).

3. **Catastrophic deaths – Disease Related**
   a. Notify State Veterinary Office.
   b. Limit exposure to other animals.
   c. Prevent visitation by unnecessary people.
   d. Dead animals should be moved into a DHEC approved transport vehicle or a DHEC approved storage area or bin.
   e. Record date of catastrophic deaths, number of deaths, method and location of disposal.

4. **Catastrophic deaths – Disaster Related**
   a. Notify State Veterinary Office - Animal Emergency Response Coordinator immediately. (See Table below)
   b. Notify the integrator, Amick Farms, or farm manager to remove useable animals.
   c. Dispose of mortality in the manner given in this CNMP for emergency dead animal disposal.
   d. Record date of catastrophic deaths, number of deaths, method and location of disposal.

5. **Land Application Manure/Waste Discharge Emergency**
   a. Stop all other activities to deal with the emergency.
   b. Assess the extent of the emergency and determine how much help is needed.
   c. Call for help if needed.
   d. If spilled on the road, call the sheriff's office for traffic control and clean the spill immediately from the road and roadside if needed.
   e. Contain the spill or runoff from entering the stream or waterway using straw bales, saw dust, or soil material.
   f. Prevent further runoff by incorporating the waste.
   g. Initiate additional containment measures, corrective measures, or property restoration measures as directed by emergency agency officials.

6. **Manure Removal**
   a. Place manure in stacking structure if available. Do not stack old manure next to new or wet manure next to dry.
   b. Cover any manure stacks for temporary storage with plastic and weight down the edges. Cut a 4" diameter hole in the top and cover the hole with screen wire.

7. **Fire**
    a. Stop all other activities to deal with the emergency.
    b. Try to extinguish the fire with the appropriate rated fire extinguishers.
    c. If fire cannot be contained, call for help (See Table below)

8. **Assess the extent of the spill and note any obvious damages.**
    a. Did the by-product reach any surface waters?
    b. Approximately how much was released and for what duration?
    c. Any damage noted, such as employee injury, fish kills, or property damage?
    d. Did the spill leave the property?
    e. Did the spill have the potential to reach surface waters?
    f. Could a future rain event cause the spill to reach surface waters?
    g. Are potable water wells in danger (either on or off of the property)?
    h. How much reached surface waters?

9. **Provide the following information when reporting an emergency.**
    a. Your name and phone number.
    b. Directions to the farm.
    c. Description of emergency.
    d. Estimate of the amounts, area covered, and distance traveled.
    e. Has manure reached surface waters or major field drains?
    f. Is there any obvious damage: employee injury, fish kill, or property damage?
    g. What is currently in progress to contain situation?

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

11. **Documentation.** The following items shall be documented in writing and filed with the Emergency Action Plan for future reference and emergency response training.
    a. Date and time, location of spill, affected landowners.
    b. Affect of manure spill on any surface water body or potable water well.
    c. Approximately how much manure was released and for what duration.
    d. Amount of manure, if any, that left the farm property.
    e. Any damage, such as personal injury, fish kill, property damage.
    f. Cause of the spill.
    g. Procedure to handle the emergency.
    h. Clean up efforts.
    i. List of authorities called, those that responded, and the time it took for them to respond.
    j. Recommendations to prevent a reoccurrence

3.2. Biosecurity Measures

Biosecurity is critical to protecting livestock and poultry operations. Visitors must contact and check in with the producer before visiting the operation or entering any production or storage facility.

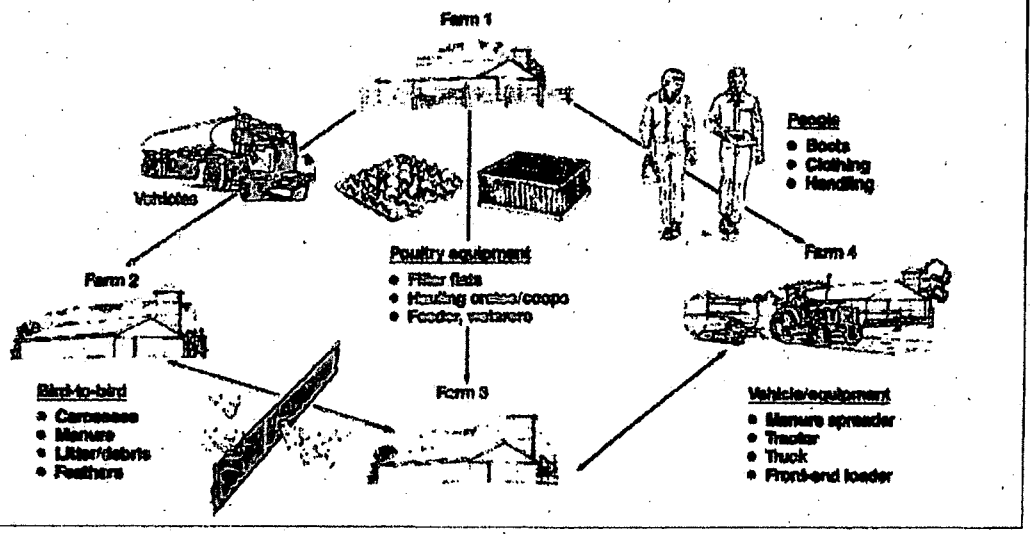
The following narrative describes how animal veterinary wastes (including medical equipment, empty containers, sharps and expired medications) will be managed at the operation.

Steps to Take to Avoid Disease Spread - Poultry

To reduce the risk of introducing disease into a flock, maintain a biosecurity barrier (physical barrier, personal hygiene, and equipment sanitation) between wildlife, poultry facilities, other commercial avian facilities, and pet birds. Some examples of good biosecurity practices include:

a. Permit only essential workers and vehicles on the premises.
b. Provide clean clothing and a disinfection procedure for employees and visitors. Know your visitor's travel history.
c. Clean and disinfect vehicles at the farm entrance.
d. Avoid visiting other avian facilities.
e. Do not keep pet birds.
f. Protect the flock from exposure to wild birds.
g. Control movement associated with the disposal of bird carcasses, litter, and manure.
h. Quarantine new additions to the flock. Never allow people or material to move from the quarantined birds to the flock.
i. Report signs of disease to your veterinarian.

How Diseases Spread



3.3 Emergency Contact Information

Farm Information

Farm Name	Jim Young Broilers
Address	Lisbon Rd. Near Hwy 72 Mountville, SC 29370
Farm Phone	803-479-1363
Permit #	N/A
Directions to Farm	Head E on Mountville Rd. and turn left onto SC-72 E, drive 1.8 miles. Turn left onto Lisbon Rd. drive 0.3 miles the farm is on the right.

Farm Contacts

	Name	Phone
Farm Owner/Manager	James Young Jr.	803-479-1363
Fire or Ambulance	911	911

Agency Contacts

Contact Agency	Person	Day Phone	Emergency Number
DHEC	Regional Office	864-833-5883	1-888-481-0125
State Veterinarian Emergency	Animal Response Coordinator		1-803-788-2260 ext. 700
Sheriff's Office	Laurens County Sheriff	864-984-4967	911
NRCS	County Office	864-984-6921	
Clemson Extension	County Office	864-984-2514	
Integrator	Amick Farms	864-923-2368	

Property Owner Contacts

Name	Location of Property	Day Phone
James Young Jr.	Headquarters	803-479-1363
Calvin Young	Zone 1-4, 35ac. Field, Michael Back, Michael House, and	864-833-5098
James and Calvin Young	Alfalfa, Big Field, Walnut, and Calvins Back	864-923-3073 & 864-833-5098

3.4 Vector and Odor Abatement Plan

A site specific vector/odor abatement plan for Amick Farms producers is included on the following pages

Amick Farms Odor and Vector Abatement Plan for Jim Young Broilers

Odor Abatement Plan

Some of the potential sources of odors in and around the poultry houses may include: wet litter from leaky waterers, poultry bedding that is overloaded with manure (too little bedding relative to the amount of manure produced by the birds), spoiled or moldy feed, dust from feeders, bedding and animals, exhaust ventilation air, gaseous emissions of ammonia or hydrogen sulfide, uncovered manure piles, poorly managed stacking sheds, poorly managed or located covered manure piles, improper land application of manure, and improper disposal of dead birds. These sources may cause poor air quality in and around the facility and potentially impact the health of the farm workers, animals, and the surrounding community. Therefore, it is imperative that the farm utilizes the best management practices to control dust and odors before they become a problem.

This operation has developed this Odor Abatement Plan in order to minimize the formation of odor and dust, prevent the release of odor and dust into the atmosphere, and avoid the transportation of dust and odor to any nearby receptors in the community. Many of the potential sources of odor can be minimized by implementing some of the following best management practices for odor control: provide adequate bedding for each flock of birds, remove manure from the building as often as possible, repair all leaky waterers or pipes, clean feeding equipment regularly, remove spoiled feed regularly, remove dead animals and dispose of them promptly, cover litter stockpiles completely with an appropriate anchored and vented cover immediately after removal, avoid excess moisture in stacking sheds since excess moisture increases the amount of odor generated due to anaerobic decomposition, make sure ventilation fans are cleaned regularly and that airflow rates are adequate for the season and stage of growth, avoid orienting buildings so that ventilation fans blow exhaust air toward neighbors or adjacent roadways, land-apply manure at the appropriate times, cover manure when transporting it off site to prevent dust and spillage, incorporate manure into soil as soon as possible, land apply manure in the morning on sunny days, apply manure when winds are blowing away from neighbors, apply manure on weekdays when neighbors have a higher probability of being away from home, and finally, always contact close neighbors prior to spreading to avoid spoiling their outdoor activities.

Some specific actions that may be taken to correct an odor problem include: drying, aerating, or composting the manure; incorporating manure into the soil; or using an odor additive to eliminate the odor.

A ventilation system will be installed in the proposed poultry houses. The ventilation system will serve to maintain an adequate supply of fresh air for the birds, remove excess moisture during cold weather, remove combustion gases from heaters, provide adequate temperature control during mild weather, and limit a temperature rise during hot weather. Managing the temperature and relative humidity in the houses is an important factor in controlling ammonia levels within the house as well as odors from the poultry houses. Odors can be carried on the dust particles from a poultry facility. Dust control in the buildings is an important factor in reducing the

amount of odor at the facility. Dust control can also improve the indoor air quality of the poultry barns, which is important for animal health and worker health and safety. Dust in the buildings can result from the feed, manure, wood shavings, and animal activity. Methods to reduce dust include: cleaning and disinfecting the interior of the building between flocks; adding oil to dry ration feeds; performing proper and timely maintenance on feeders, augers, and other feed handling equipment; and managing the relative humidity (RH) in the poultry houses so that the air is not too dry (low RH).

Artificial breaking walls, trees, and other vegetation can also help to filter and disperse dust and odors from poultry houses.

Specific actions for the abatement of odor at this facility are outlined in the Odor & Vector Abatement Plan approved by the operation's integrator. The specific action plan is included in Appendix C of this plan.

Vector Abatement Plan

Some of the types of vectors that may present a problem at a poultry farm are flies, rodents, darkling beetles, mosquitoes, dogs, and birds. Most vector attraction can be greatly minimized with proper management and sanitation. The following best management practices may be utilized to prevent vector attraction: remove all excess building materials, remove any excess feed from the houses or around feed bins, keep grass and weeds mowed around the facilities, keep all buildings free of trash and debris, appropriately use and service bait stations, properly dispose of dead animals in a timely manner, and eliminate any standing water in the area surrounding the facility.

The best management practices that may be utilized to prevent vector attraction when land-applying manure are to incorporate manure immediately after application and cover any manure that may be temporarily stored prior to land application. In order to reduce the vector attraction for rodents, it is imperative to eliminate any areas which allow for harboring of rodents and prevent feed spillage. Repair any damaged feeders and keep them properly adjusted so excess feed does not accumulate in feeder bowl, trough, or around the base of the feeder. Waste feed (wet or contaminated feed) should be properly utilized or discarded. Waterers should be properly maintained and repaired to prevent leaks. Unused pens should have all feed removed and feeders cleaned. Good sanitation practices for manure management should be followed and excess manure packs along walls and curtains should be removed. The producer should conduct biweekly rodent monitoring programs. This should include all animal production buildings, feed bins, storage rooms, and office buildings. Inspect the inside and outside of the animal production buildings for signs of rodents (rodent droppings, digging activities, nests, etc.). If a bait system is used, it should be routinely inspected and refilled. If pesticides or other chemical treatments are utilized to control vectors, care should be taken to prevent resistance to the chemical. Rotation of different chemicals may prevent resistance. The integrator should be notified of any chemical or pesticide applications prior to their utilization. Care will also be taken to ensure the proper storage and disposal of any unused chemicals on this farm.

The local Clemson University Extension Service office can provide additional information on proper disposal of pesticides and chemicals. The local Clemson Extension Agent for this farm is located in Lexington SC, and can be reached at (864)923-2366.

Manure that contains fly larvae and fly pupae will be disked into the ground immediately or be treated with an appropriate fly control method. If the manure application on a land application area creates a fly problem for the community, the producer will be responsible for the control of all flies resulting from the application of the manure.

Using best management practices (BMP), such as those listed above should be utilized to prevent vector problem. However, if a vector problem occurs, corrective actions should be taken and the BMP should be closely reviewed and updated to prevent these problems in the future. The

Richard Nichols
Amick Farms LLC

Live Operations Czar
Carolina Division
Monetta, SC

(803)532-1480

3.5 Vector Control and Abatement

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

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

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

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

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

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

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

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

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

For more details on specifics (rats, filth flies, etc.) information may be obtained from the Clemson Agricultural Extension Offices or the NRCS office. A source of information is also available from Clemson's South Carolina Confined Animal Manure Manager's program, in Chapter 10 of the applicable species, available at: http://www.clemson.edu/camm/.

3.6 Air Quality

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

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

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

Growing and Storage Facilities

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

Locate animal by-product management facilities and utilization areas as far as practical from neighboring residences, recreational areas, or other conflicting land uses. Avoid sites where radical shifts in air movement occur between day and night, such as those near large bodies of water or steep topography. A component's location in relation to surrounding topography may also strongly influence the transfer of odor because of daily changes in temperature and resulting airflow. To provide optimum conditions, prevailing winds should carry odors away from nearby residences.

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

Mitigation of Odor

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

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

3.7. Catastrophic Animal Mortality Management

Refer to NRCS standards, or state guidance, regarding appropriate catastrophic animal mortality handling methods.

Plan for Catastrophic Animal Mortality Management

The following narrative describes how catastrophic animal mortality will be managed in a manner that protects surface and ground water quality. All national, state and local laws, regulations and guidelines that protect soil, water, air, plants, animals and human health must be followed.

Burial

Dig a large pit or trench as located on the plan map. Insert dead animals daily, and cover them with one to two feet of soil.

The pit should be graded so that it does not impound water. Runoff from the pit should flow into a grass filter. Note: When adequate drainage is not provided, these pits or trenches fill with water and carcasses may actually float to the surface. The water in the pit is very bacteria-laden and may be a hazard to both animal and human health. There is also high potential for ground water contamination from both bacteria and nutrients.

Burial trenches and pits must have at least a 2.0 foot separation between the bottom of the trench and groundwater.

The pits should also have a berm to divert rainfall and runoff from the site. The soil should be able to infiltrate any rainfall that falls directly into the pit.

Vectors (dogs, rats, snakes, flies, etc.) are potential problems in a burial situation. If a producer chooses this method for disposal of dead animals, the carcasses must be covered daily as to reduce vectors in and around the trench or pit.

When a burial pit is full, the site should be capped with a mound of soil so that precipitation is not allowed to collect in the closed pit. Also, the area should be grassed as to prevent erosion. The burial area should be monitored so that these conditions remain after settling of decomposing carcasses and capping material.

Important! In the event of catastrophic animal mortality, contact the following authority before beginning carcass disposal:

State Veterinarian and Director
Boyd H. Parr, DVM
803-788-2260

3.8. Chemical Handling

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

	This is not a regulatory-agency permitted facility. This section does not apply.

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

Section 4. Land Treatment

4.1. Map(s) of Fields and Conservation Practices

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DHEC_003243

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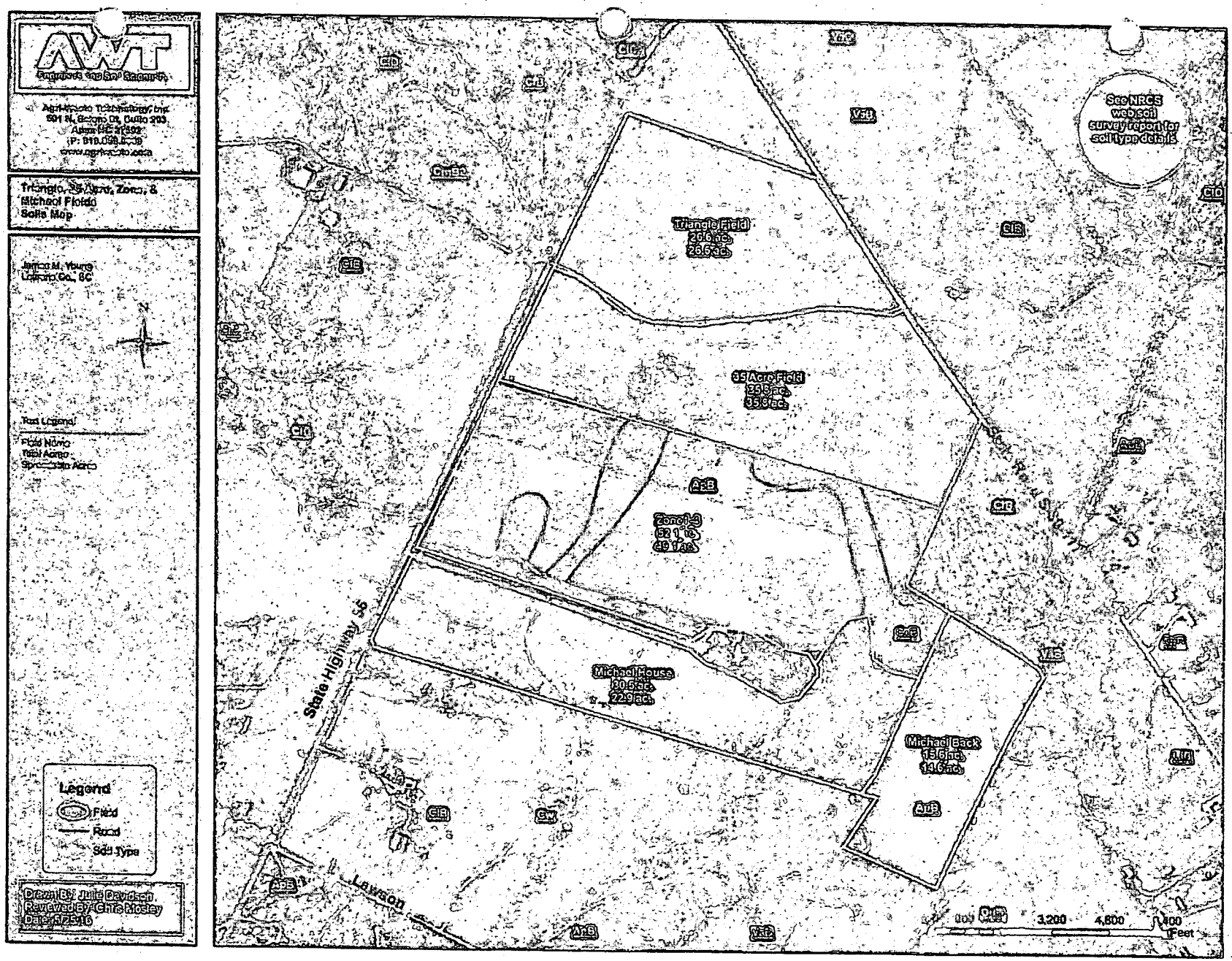

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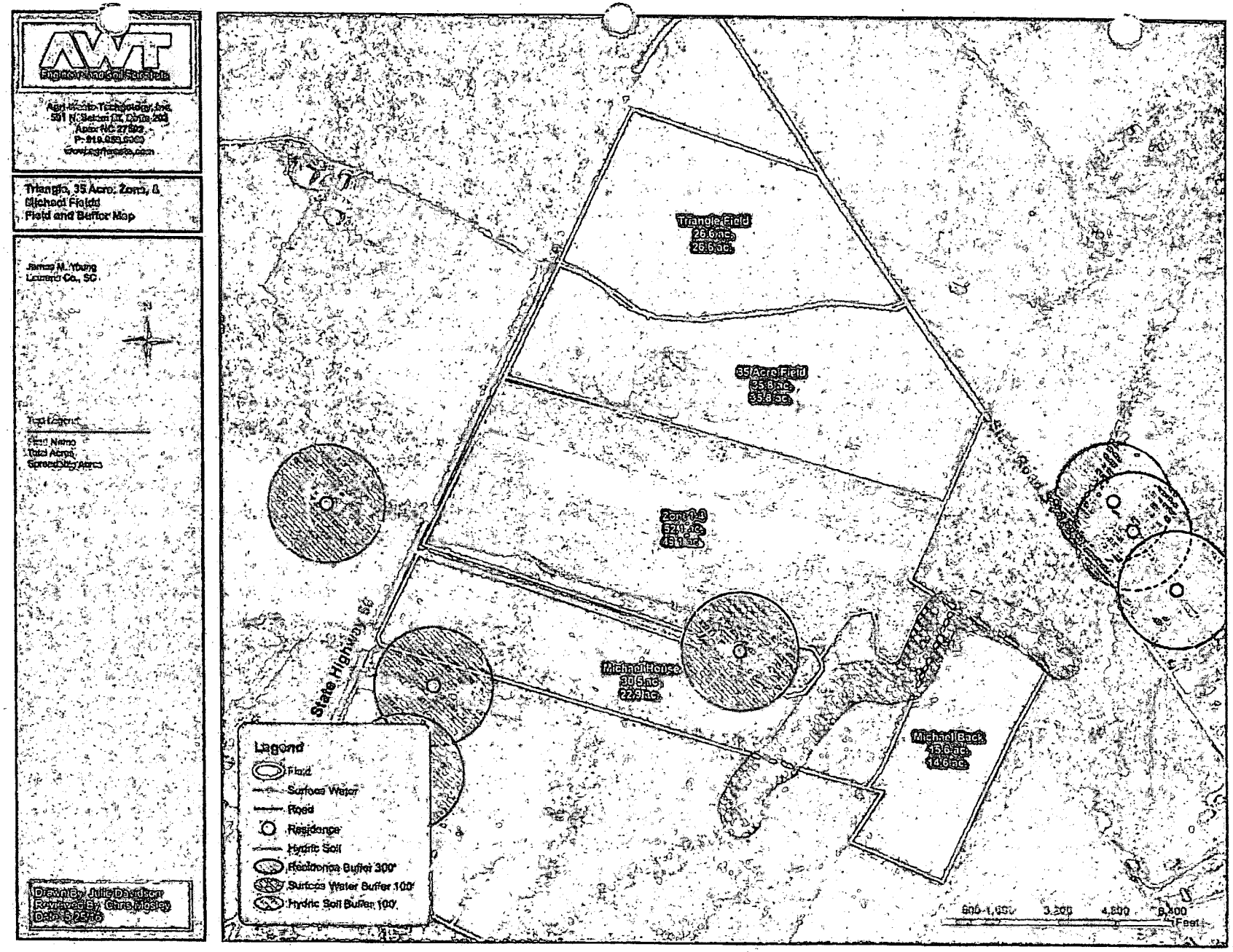

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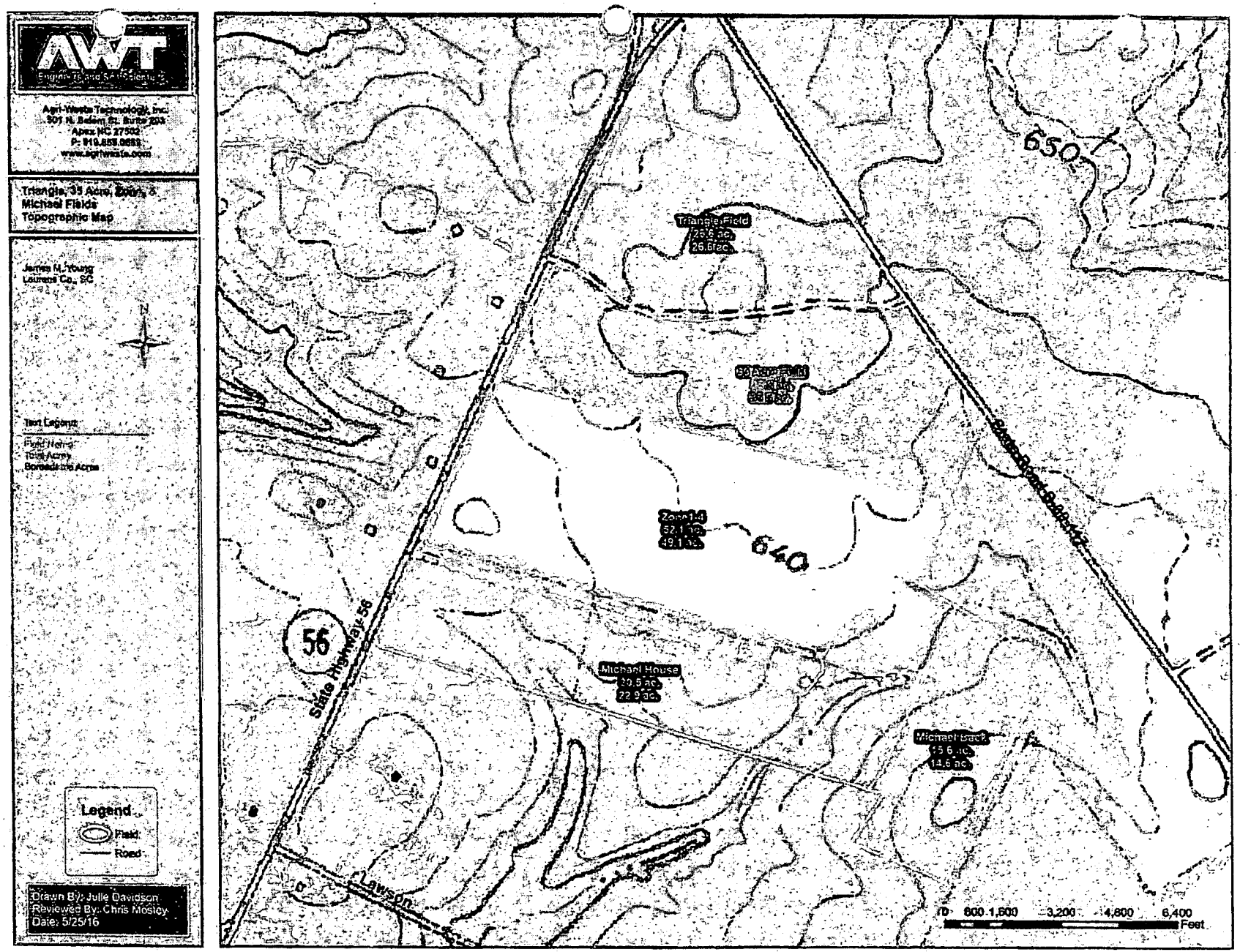
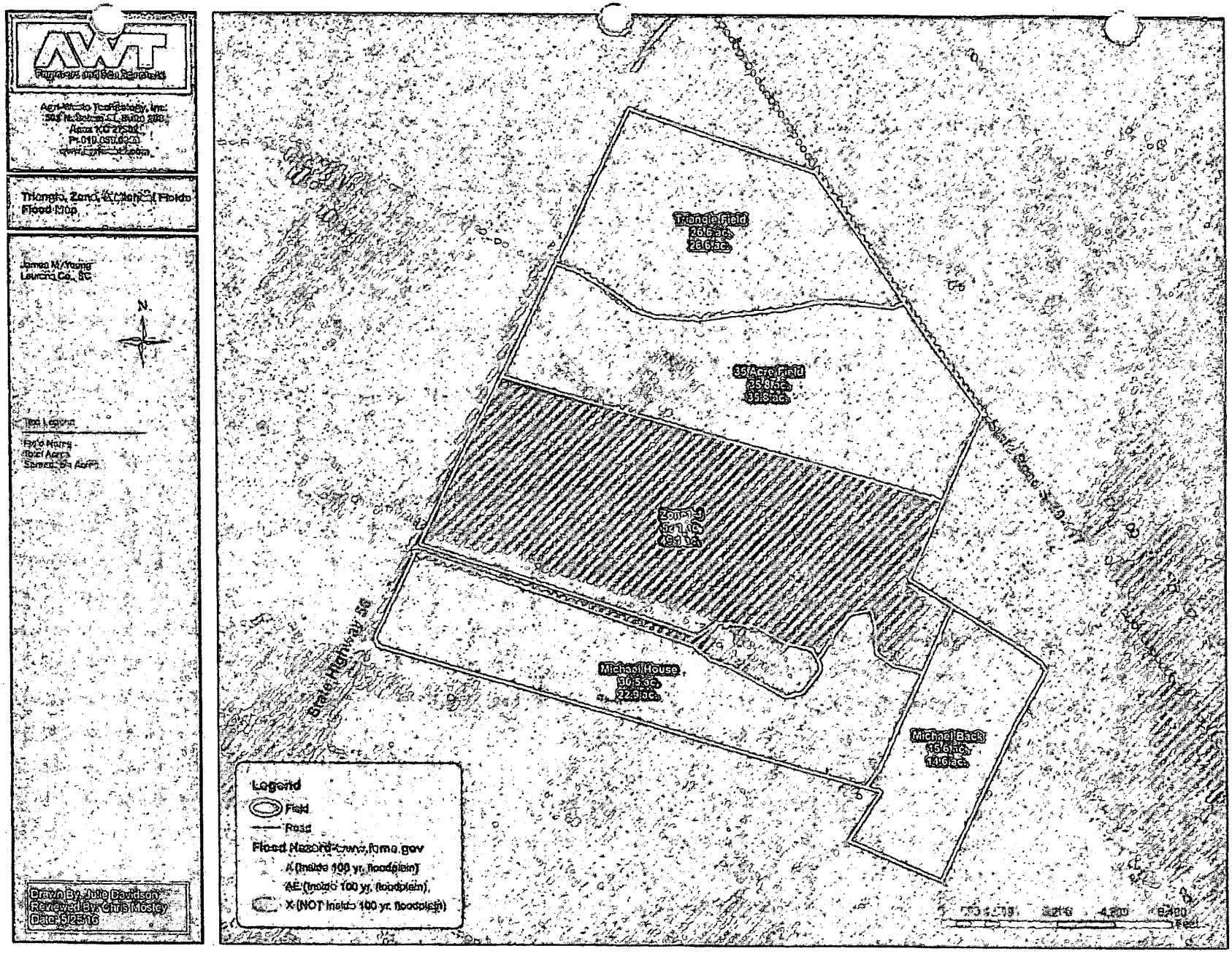

Agri-Waste Technologies, Inc.
Triangle, 35 Acre, Both, & Michael Fields
Topographic Map
James M. Young
Laurens Co., SC
Text Legend:
Field Name
Total Acres
Borrowable Acres
Legend
Field
Road
Drawn By: Julie Davidson
Reviewed By: Chris Mosley
Date: 5/25/16
Triangle Field
25.6 ac.
26.6 rec.
Zone 1-4
52.1 ac.
49.1 ac.
Michael House
39.5 ac.
22.9 ac.
650
640
56
State Highway 56
Lawson
0 600 1,600 3,200 4,800 6,400
Feet

1554



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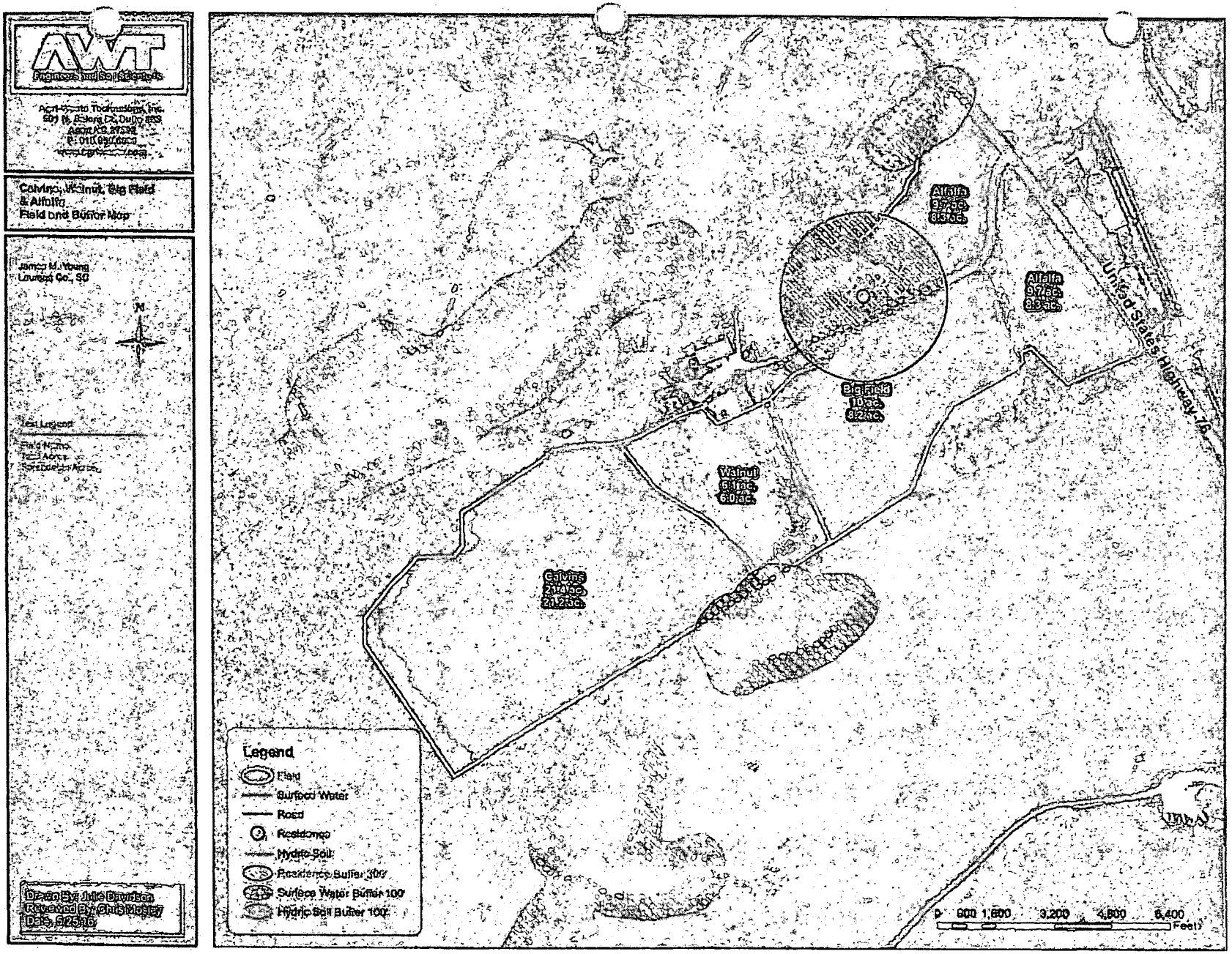
DHEC_003247



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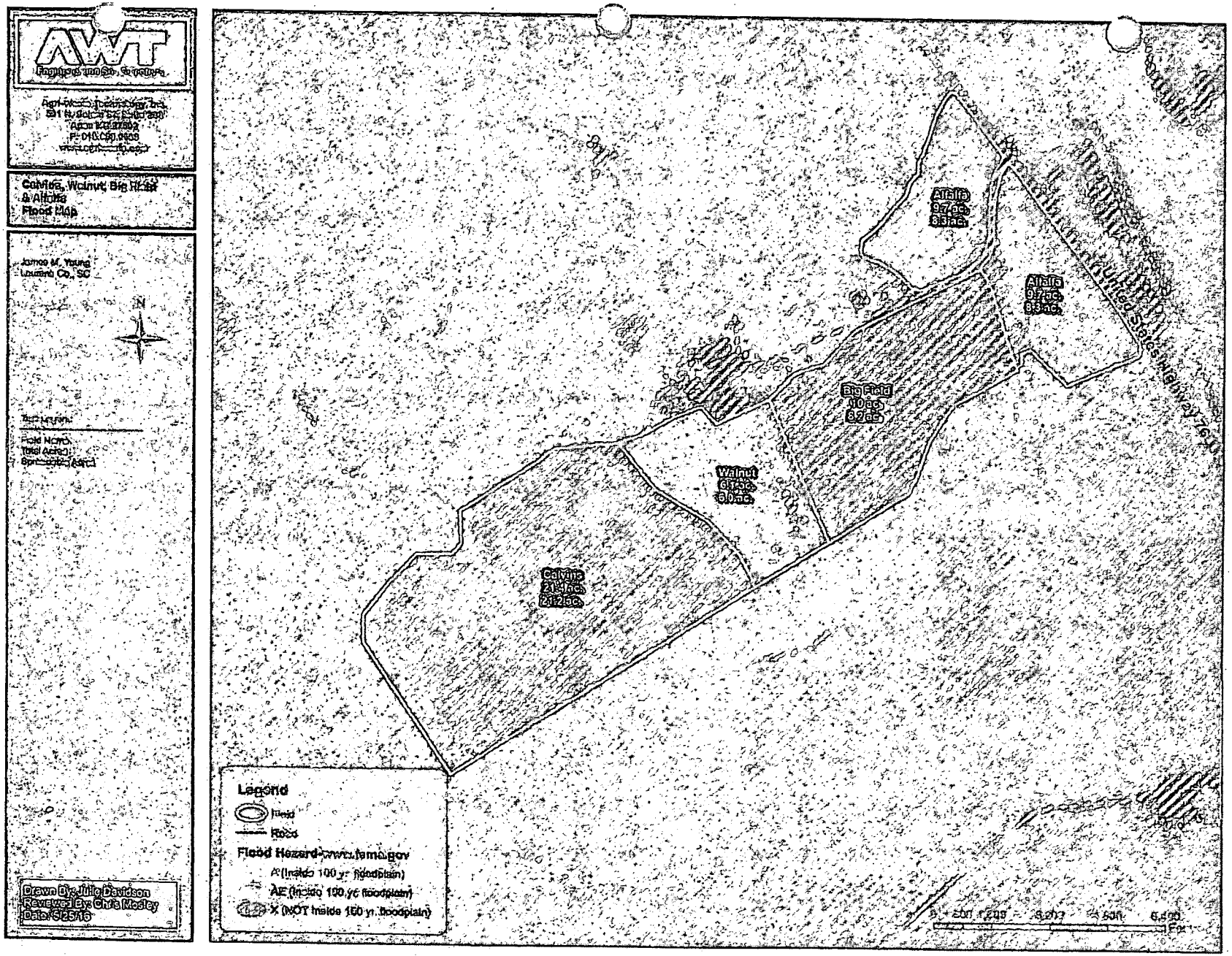
DHEC_003248

AWT
Agri-Waste Technology, Inc.
Calving, Walnut, Big Field & Alfalfa
Topographic Map
James A. Cumming
Licensed CA & SC
Field Name
Total Acres
Spreadable Acres
Legend
Field
Road
Drawn By: Julie Davidson
Reviewed By: Chris Mosley
Date: 5/25/16
Alfalfa
Alfalfa
Big Field
Walnut
Calving
600
600
622
0 800 1,600 3,200 4,800 6,400
Feet

1557

1557



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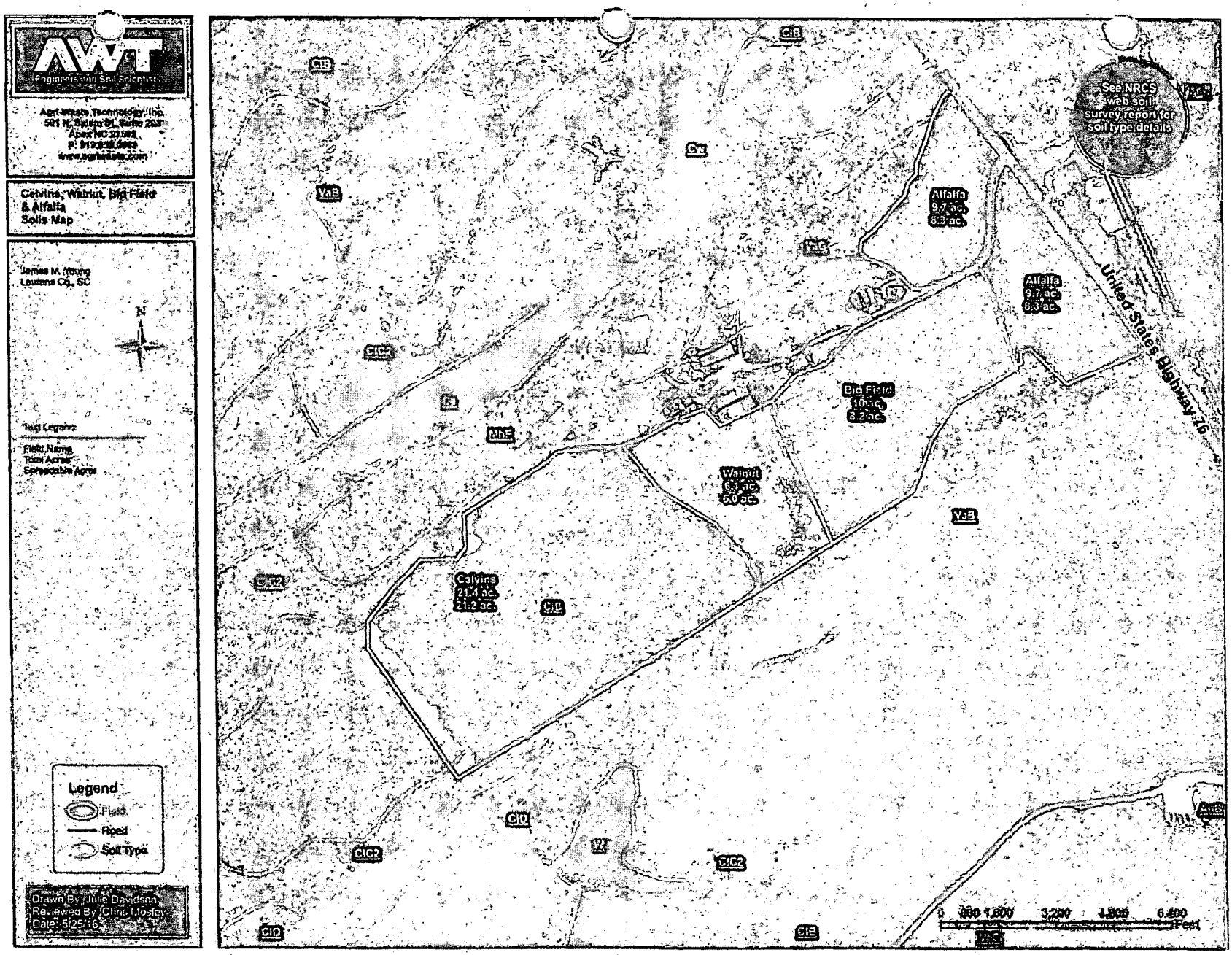

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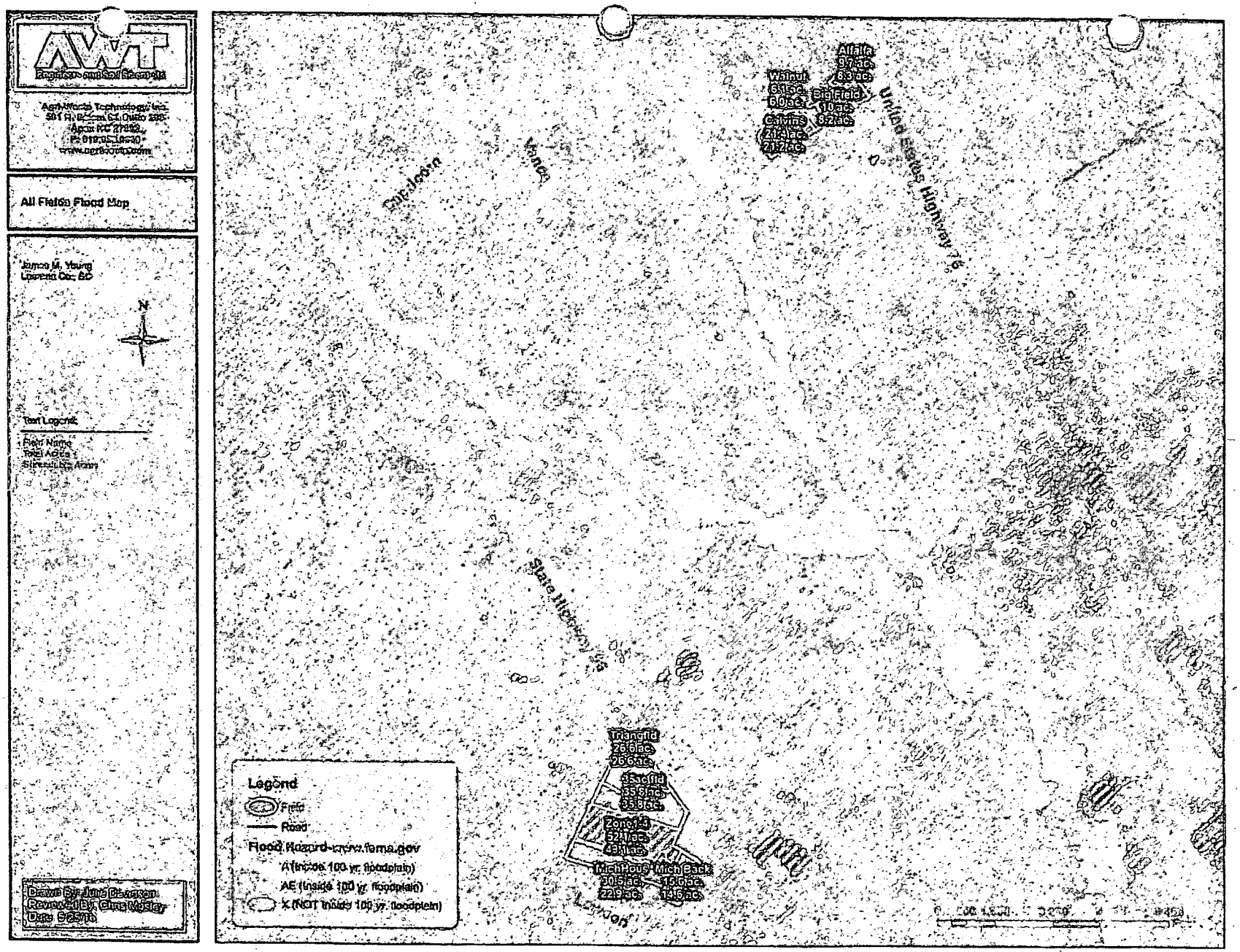

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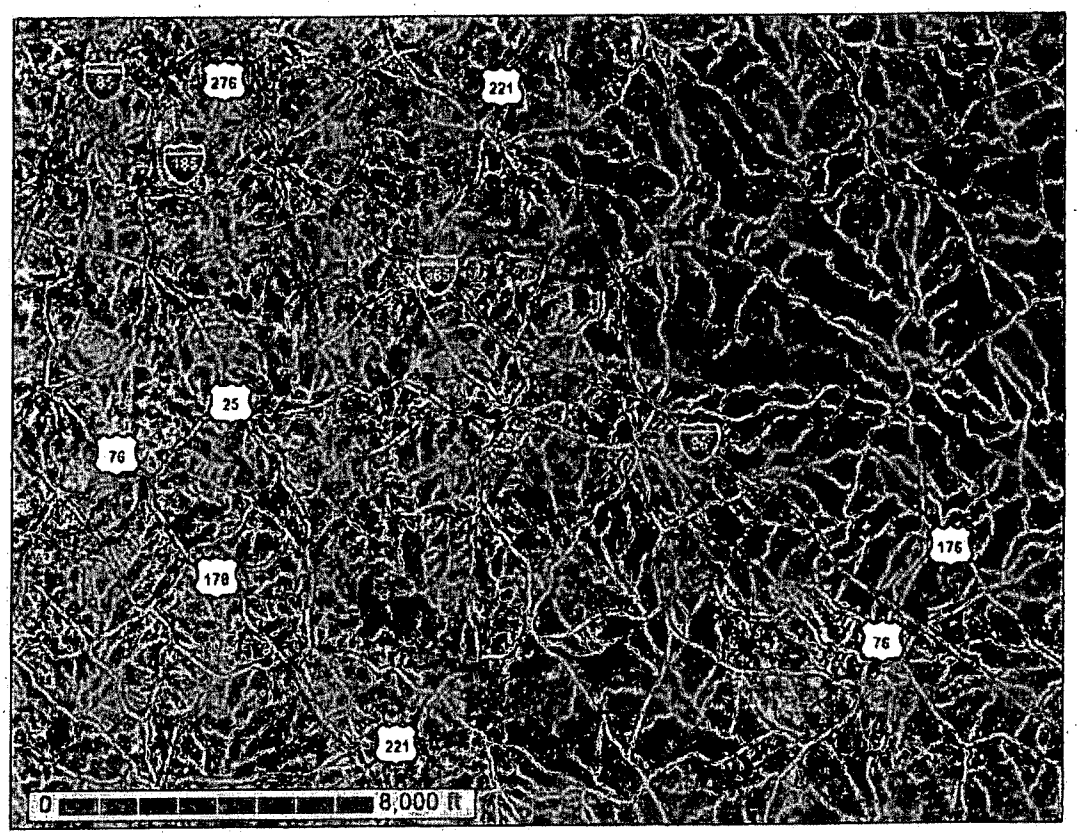
USDA United States Department of Agriculture

NRCS Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Laurens County, South Carolina

James Young CNMP



May 19, 2016

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Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Map Unit Legend

Laurens County, South Carolina (SC059)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
ApB	Appling loamy sand, 2 to 6 percent slopes	0.0	0.0%
CIB	Cecil sandy loam, 2 to 6 percent slopes	0.0	0.0%
EnC	Enon sandy loam, 6 to 10 percent slopes	0.0	0.0%
VaB	Vance sandy loam, 2 to 6 percent slopes	0.0	0.0%
WlF	Wilkes soils, 15 to 40 percent slopes	0.0	0.0%
Totals for Area of Interest		**461,914.4**	**100.0%**

Map Unit Descriptions

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, along with the maps, can be used to determine the composition and properties of a unit.

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

for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of

the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Laurens County, South Carolina

ApB—Appling loamy sand, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2th05
Elevation: 190 to 870 feet
Mean annual precipitation: 40 to 69 inches
Mean annual air temperature: 50 to 66 degrees F
Frost-free period: 180 to 280 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Appling and similar soils: 92 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Appling

Setting

Landform: Interfluves
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from gneiss and/or residuum weathered from granite

Typical profile

A - 0 to 9 inches: loamy sand
Bt - 9 to 33 inches: clay
BC - 33 to 80 inches: sandy clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B

Minor Components

Helena

Percent of map unit: 6 percent
Landform: Interfluves
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Interfluve, side slope

Down-slope shape: Convex
Across-slope shape: Linear

Saw
Percent of map unit: 2 percent
Landform: Interfluves
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Linear

CIB—Cecil sandy loam, 2 to 6 percent slopes

Map Unit Setting
National map unit symbol: 2q7j7
Elevation: 150 to 1,250 feet
Mean annual precipitation: 40 to 69 inches
Mean annual air temperature: 50 to 66 degrees F
Frost-free period: 180 to 280 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Cecil and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cecil

Setting
Landform: Interfluves
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from gneiss and/or granite

Typical profile
A - 0 to 6 inches: sandy loam
Bt - 6 to 42 inches: clay
BC - 42 to 80 inches: clay loam

Properties and qualities
Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Available water storage in profile: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B

Minor Components

Cataula

Percent of map unit: 3 percent
Landform: Interfluves
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear

Bethlehem

Percent of map unit: 2 percent
Landform: Interfluves
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Linear

EnC—Enon sandy loam, 6 to 10 percent slopes

Map Unit Setting

National map unit symbol: 4cng
Mean annual precipitation: 41 to 54 inches
Mean annual air temperature: 47 to 73 degrees F
Frost-free period: 173 to 216 days
Farmland classification: Not prime farmland

Map Unit Composition

Enon and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Enon

Setting

Landform: Interfluves
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey residuum weathered from hornblende, diorite, or gabbro

Typical profile

Ap - 0 to 5 inches: sandy loam
Bt - 5 to 38 inches: clay

C - 38 to 79 inches: sandy loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C

VaB—Vance sandy loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 4cp6
Mean annual precipitation: 41 to 54 inches
Mean annual air temperature: 47 to 73 degrees F
Frost-free period: 173 to 216 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Vance and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Vance

Setting

Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey residuum weathered from granite and gneiss

Typical profile

Ap - 0 to 6 inches: sandy loam
Bt - 6 to 40 inches: clay
C - 40 to 55 inches: sandy clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C

WIF—Wilkes soils, 15 to 40 percent slopes

Map Unit Setting

National map unit symbol: 4cpc
Mean annual precipitation: 41 to 54 inches
Mean annual air temperature: 47 to 73 degrees F
Frost-free period: 173 to 216 days
Farmland classification: Not prime farmland

Map Unit Composition

Wilkes and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wilkes

Setting

Landform: Interfluves
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy residuum weathered from hornblende, diorite, or gabbro

Typical profile

Ap - 0 to 7 inches: sandy loam
Bt - 7 to 10 inches: sandy clay loam
Cr - 10 to 20 inches: weathered bedrock
R - 20 to 79 inches: unweathered bedrock

Properties and qualities

Slope: 15 to 40 percent
Depth to restrictive feature: 10 to 20 inches to paralithic bedrock; 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.01 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Available water storage in profile: Very low (about 1.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D

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Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Soil Physical Properties

This folder contains a collection of tabular reports that present soil physical properties. The reports (tables) include all selected map units and components for each map unit. Soil physical properties are measured or inferred from direct observations in the field or laboratory. Examples of soil physical properties include percent clay, organic matter, saturated hydraulic conductivity, available water capacity, and bulk density.

Physical Soil Properties

This table shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In this table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In this table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, saturated hydraulic conductivity (Ksat), plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at 1/3- or 1/10-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates in the table are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity (Ksat) is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In this table, the estimated content of organic matter is expressed as

a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The content of organic matter in a soil can be maintained by returning crop residue to the soil.

Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in the table as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and Ksat. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind and/or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the "National Soil Survey Handbook."

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Reference:
United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. (http://soils.usda.gov)

Physical Soil Properties–Laurens County, South Carolina														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
ApB—Appling loamy sand, 2 to 6 percent slopes														
Appling	0-9	73-86-87	3-4-26	1-10-10	1.51-1.58-1.66	42.00-92.00-141.00	0.09-0.10-0.11	0.0-0.2-0.4	0.5-0.5-1.0	.10	.10	5	2	134
	9-33	20-30-40	0-16-29	35-54-60	1.35-1.43-1.51	4.00-9.00-14.00	0.08-0.10-0.16	1.3-2.0-2.7	0.0-0.1-0.5	.15	.15			
	33-80	40-56-70	6-17-27	23-27-34	1.51-1.56-1.62	4.00-9.00-14.00	0.11-0.12-0.13	0.8-1.0-1.4	0.0-0.1-0.5	.24	.24			
Helena	0-7	55-70-75	10-18-30	5-12-15	1.58-1.60-1.62	14.00-28.00-42.00	0.12-0.13-0.14	0.0-1.5-2.9	0.5-1.0-2.0	.24	.24	5	3	86
	7-12	50-60-70	5-17-25	22-23-30	1.46-1.51-1.56	1.40-3.00-4.00	0.15-0.16-0.17	3.0-4.5-5.9	0.0-0.3-0.5	.28	.28			
	12-38	15-28-40	10-22-40	33-50-56	1.44-1.50-1.55	0.42-1.00-1.40	0.08-0.10-0.16	6.0-7.5-8.9	0.0-0.3-0.5	.20	.20			
	38-80	35-50-60	12-20-40	15-30-35	1.46-1.51-1.56	1.40-3.00-4.00	0.11-0.16-0.17	3.0-4.5-5.9	0.0-0.1-0.5	.24	.24			
Saw	0-10	60-70-78	4-16-27	8-14-18	1.00-1.25-1.50	14.00-28.00-42.00	0.12-0.13-0.14	0.0-1.5-2.9	0.5-0.5-1.5	.17	.17	2	3	86
	10-22	25-36-44	10-20-29	36-44-50	1.30-1.40-1.50	4.00-9.00-14.00	0.08-0.10-0.16	0.0-1.5-2.9	0.0-0.3-0.5	.28	.28			
	22-80	—	—	—	—	0.00-0.10-0.42	0.00-0.00-0.01	—	—					

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Physical Soil Properties–Laurens County, South Carolina														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/in*	*Pct*	*Pct*					
CtB—Cecil sandy loam, 2 to 6 percent slopes														
Cecil	0-6	45-70-85	0-20-45	5-10-20	1.30-1.40-1.50	14.00-28.00-42.00	0.12-0.13-0.14	0.2-0.4-0.9	0.5-0.5-1.0	.24	.24	5	3	86
	6-42	0-30-45	0-16-53	35-55-70	1.30-1.40-1.50	4.00-9.00-14.00	0.08-0.10-0.16	0.9-1.8-2.6	0.0-0.1-0.5	.15	.15			
	42-80	20-45-80	0-20-53	20-35-35	1.30-1.40-1.50	4.00-9.00-14.00	0.14-0.15-0.19	0.4-1.0-1.2	0.0-0.1-0.5	.17	.17			
Cataula	0-5	48-70-85	3-20-45	5-10-15	1.35-1.55-1.75	14.00-28.00-42.00	0.11-0.13-0.14	0.0-1.5-2.9	0.5-0.8-1.0	.28	.28	3	3	86
	5-16	5-32-45	1-16-52	35-53-70	1.30-1.45-1.60	1.40-3.00-4.00	0.08-0.09-0.16	0.0-1.5-2.9	0.0-0.1-0.5	.20	.20			
	16-45	6-41-80	1-18-52	30-41-50	1.75-1.85-1.95	0.42-0.90-1.40	0.06-0.07-0.13	0.0-1.5-2.9	0.0-0.1-0.5	.24	.24			
	45-80	15-58-80	2-17-62	20-28-35	1.60-1.70-1.80	1.40-3.00-4.00	0.11-0.12-0.13	0.0-1.5-2.9	0.0-0.1-0.5	.24	.24			
Bethlehem	0-7	53-70-85	0-16-30	8-14-20	1.00-1.25-1.50	14.00-28.00-42.00	0.12-0.13-0.14	0.0-1.5-2.9	0.5-0.5-1.5	.20	.20	3	3	86
	7-11	20-54-80	0-15-53	20-31-35	1.20-1.40-1.50	4.00-9.00-14.00	0.14-0.16-0.19	0.0-1.5-2.9	0.0-0.3-0.5	.17	.17			
	11-39	0-36-45	0-20-53	35-45-65	1.30-1.40-1.50	4.00-9.00-14.00	0.08-0.10-0.16	0.0-1.5-2.9	0.0-0.3-0.5	.15	.15			
	39-42	—	—	—	—	0.01-0.20-0.42	0.00-0.00-0.01	—	—					
	42-80	—	—	—	—	0.00-0.10-0.42	0.00-0.00-0.01	—	—					

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Physical Soil Properties–Laurens County, South Carolina														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
EnC—Enon sandy loam, 6 to 10 percent slopes														
Enon	0-5	-68-	-22-	5-10- 15	1.45-1.55-1.65	14.00-28.00-42.00	0.11-0.13-0.15	0.0- 1.5- 2.9	0.5- 1.3- 2.0	.28	.28	5	3	86
	5-38	-35-	-13-	35-52- 60	1.30-1.40-1.50	0.42-1.00-1.40	0.12-0.14-0.15	6.0- 7.5- 8.9	0.1- 0.2- 0.5	.17	.17			
	38-79	-65-	-20-	10-15- 35	1.30-1.40-1.50	4.00-9.00-14.00	0.10-0.12-0.14	0.0- 1.5- 2.9	0.0- 0.1- 0.2	.24	.24			
VaB—Vance sandy loam, 2 to 6 percent slopes														
Vance	0-6	-68-	-18-	8-14- 20	1.45-1.58-1.70	14.00-28.00-42.00	0.10-0.12-0.14	0.0- 1.5- 2.9	0.5- 1.3- 2.0	.20	.20	5	3	86
	6-40	-24-	-29-	35-48- 60	1.35-1.45-1.55	0.42-1.00-1.40	0.12-0.14-0.15	3.0- 4.5- 5.9	0.1- 0.2- 0.5	.24	.24			
	40-55	-55-	-20-	15-25- 35	1.30-1.40-1.50	4.00-9.00-14.00	0.10-0.12-0.15	0.0- 1.5- 2.9	0.0- 0.1- 0.2	.24	.24			
WlF—Wilkes soils, 15 to 40 percent slopes														
Wilkes	0-7	-68-	-20-	5-13- 20	1.30-1.40-1.50	14.00-28.00-42.00	0.11-0.13-0.15	0.0- 1.5- 2.9	0.5- 1.3- 2.0	.24	.24	2	3	86
	7-10	-60-	-10-	20-30- 45	1.40-1.50-1.60	1.40-3.00-4.00	0.15-0.18-0.20	3.0- 4.5- 5.9	0.1- 0.3- 0.5	.24	.24			
	10-20	—	—	—	—	0.10-1.00-2.00	—	—	—					
	20-79	—	—	—	—	0.00-0.01-0.10	—	—	—					

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Water Features

This folder contains tabular reports that present soil hydrology information. The reports (tables) include all selected map units and components for each map unit. Water Features include ponding frequency, flooding frequency, and depth to water table.

Water Features

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which a water table, ponding, and/or flooding is most likely to be a concern.

Water table refers to a saturated zone in the soil. The water features table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely

grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Absence of an entry indicates that the data were not estimated. The dash indicates no documented presence.

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Water Features–Laurens County, South Carolina										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
ApB—Appling loamy sand, 2 to 6 percent slopes										
Appling	B	—	January	—	—	—	—	None	—	None
			February	—	—	—	—	None	—	None
			March	—	—	—	—	None	—	None
			April	—	—	—	—	None	—	None
			May	—	—	—	—	None	—	None
			June	—	—	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	—	—	—	—	None	—	None

Water Features–Laurens County, South Carolina										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
			December	—	—	—	—	None	—	None
Helena	C/D	—	January	1.5-2.5	3.0-6.7	—	—	None	—	None
			February	1.5-2.5	3.0-6.7	—	—	None	—	None
			March	1.5-2.5	3.0-6.7	—	—	None	—	None
			April	—	—	—	—	None	—	None
			May	—	—	—	—	None	—	None
			June	—	—	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	—	—	—	—	None	—	None
			December	1.5-2.5	3.0-6.7	—	—	None	—	None
Saw	C	—	January	—	—	—	—	None	—	None
			February	—	—	—	—	None	—	None
			March	—	—	—	—	None	—	None
			April	—	—	—	—	None	—	None
			May	—	—	—	—	None	—	None
			June	—	—	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	—	—	—	—	None	—	None

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DHEC_003278

Water Features–Laurens County, South Carolina										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*	*Ft*				
			December	—	—	—	—	None	—	None

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DHEC_003279

Water Features—Laurens County, South Carolina										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
CIB—Cecil sandy loam, 2 to 6 percent slopes										
Cecil	B	Low	January	—	—	—	—	None	—	None
			February	—	—	—	—	None	—	None
			March	—	—	—	—	None	—	None
			April	—	—	—	—	None	—	None
			May	—	—	—	—	None	—	None
			June	—	—	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	—	—	—	—	None	—	None

Water Features–Laurens County, South Carolina										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
			December	—	—	—	—	None	—	None
Cataula	D	Medium	January	2.0-4.0	3.0-4.9	—	—	None	—	None
			February	2.0-4.0	3.0-4.9	—	—	None	—	None
			March	2.0-4.0	3.0-4.9	—	—	None	—	None
			April	—	—	—	—	None	—	None
			May	—	—	—	—	None	—	None
			June	—	—	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	—	—	—	—	None	—	None
			December	2.0-4.0	3.0-4.9	—	—	None	—	None
Bethlehem	D	Low	January	—	—	—	—	None	—	None
			February	—	—	—	—	None	—	None
			March	—	—	—	—	None	—	None
			April	—	—	—	—	None	—	None
			May	—	—	—	—	None	—	None
			June	—	—	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	—	—	—	—	None	—	None

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Water Features—Laurens County, South Carolina										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
			December	—	—	—	—	None	—	None
EnC—Enon sandy loam, 6 to 10 percent slopes										
Enon	C	Medium	January	—	—	—	—	None	—	None
			February	—	—	—	—	None	—	None
			March	—	—	—	—	None	—	None
			April	—	—	—	—	None	—	None
			May	—	—	—	—	None	—	None
			June	—	—	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	—	—	—	—	None	—	None
			December	—	—	—	—	None	—	None

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Water Features–Laurens County, South Carolina										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
VaB—Vance sandy loam, 2 to 6 percent slopes										
Vance	C	Low	January	—	—	—	—	None	—	None
			February	—	—	—	—	None	—	None
			March	—	—	—	—	None	—	None
			April	—	—	—	—	None	—	None
			May	—	—	—	—	None	—	None
			June	—	—	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	—	—	—	—	None	—	None
			December	—	—	—	—	None	—	None

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Water Features–Laurens County, South Carolina										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
WlF—Wilkes soils, 15 to 40 percent slopes										
Wilkes	D	Very high	January	—	—	—	—	None	—	None
			February	—	—	—	—	None	—	None
			March	—	—	—	—	None	—	None
			April	—	—	—	—	None	—	None
			May	—	—	—	—	None	—	None
			June	—	—	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	—	—	—	—	None	—	None
			December	—	—	—	—	None	—	None

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4.2. Land Treatment Conservation Practices

A list and description of the planned and existing conservation practices to addresses the resource concerns and producer goals is included. In addition to the listing of the conservation practices, amount and year of installation, a description of the operation and maintenance are included.

All NRCS conservation practices shall be installed, operated and maintained according to NRCS conservation practice standards and associated technical specifications.

Land Treatment Practices

Planned Practices	Amount	Planned Year of Installation
Nutrient Management (590)	192.7 ac.*	2016
Residue and Tillage Management - No Till (329)	192.7 ac.*	2016

* Note: Spreadable acres

Nutrient Management (590)
Manage the amount, source, placement, form and timing of the application of plant nutrients and soil amendments.

- To budget and supply nutrients for plant production.
- To properly utilize manure or organic by-products as a plant nutrient source.
- To minimize agricultural nonpoint source pollution of surface and ground water resources.
- To protect air quality by reducing nitrogen and/or particulate emissions to the atmosphere.
- To maintain or improve the physical, chemical and biological condition of soil

Nutrient Management
When applying litter/compost or commercial fertilizer, calibrate application equipment to ensure that applied rates are within +/- 10% of recommended rates. It is important to avoid unnecessary exposure to chemical fertilizers and organic wastes. Protective clothing, respirator, gloves, and footwear shall be worn when appropriate. When cleaning equipment after nutrient application, residual fertilizers or wastes shall be removed and saved in an appropriate manner. If the system is to be flushed, wastewater shall be kept away from high runoff areas, ponds, lakes, streams, wells, and other water sources. Fertilizer containers shall be disposed of in an approved manner, according to local or state regulation. Organic waste and commercial fertilizer application will be based on the nutrient rates shown Nutrient Management Section of this CNMP.

Land Application Equipment Calibration
The land application equipment, when used more than once per year shall be calibrated at least annually. More frequent calibration may be required to ensure that proper application rates are being attained. The two most recent calibration records shall be retained and made available for SCDHEC review upon request. If the equipment has not been used in over one year, then the equipment must be calibrated prior to use. (See http://www.clemson.edu/camm for calibration instructions.)

Residue and Tillage Management No Till (329)

Managing the amount , orientation, and distribution of crop and other plant residue on the soil surface year round, limiting soil-distributing activities to those necessary to place nutrients, condition residue and plant crops.

Evaluate/measure the crop residues cover and orientation after each crop to ensure the planned amounts and orientation are being achieved. Adjust management as needed to either plan a new residue amount and orientation or adjust the planting and/or harvesting equipment.

Section 5. Soil and Risk Assessment Analyses

5.1. Soil Information

Field	Soil Survey	Map Unit	Soil Component Name	Surface Texture	Slope Range (%)	OM Range (%)	Hydro-logic Group	Permeability Class	Soil Group
Zone 1-4	059	ApB	Appling	LS	2-6%	0.5-1%	B	Mod	4
35ac. Field	059	ApB	Appling	LS	2-6%	0.5-1%	B	Mod	4
Michael Back	059	ApB	Appling	LS	2-6%	0.5-1%	B	Mod	4
Michael House	059	ApB	Appling	LS	2-6%	0.5-1%	B	Mod	4
Calvins	059	CIB	Cecil	SL	2-6%	0.5-1%	B	Mod	4
Triangle Field	059	CIB	Cecil	SL	2-6%	0.5-1%	B	Mod	4
Alfalfa	059	VaB	Vance	SL	2-6%	0.5-2%	C	VSlow	4
Big Field	059	VaB	Vance	SL	2-6%	0.5-2%	C	VSlow	4
Walnut	059	VaB	Vance	SL	2-6%	0.5-2%	C	VSlow	4

5.2. Predicted Soil Erosion

Average water, wind, irrigation, gully and ephemeral soil loss

Field	Predominant Soil Type	Slope (%)	Conservation Plan Soil Loss (Ton/A/Yr)	T Factor (Ton/A/Yr)
Zone 1-4	ApB (Appling LS)	4.0	0.1	5
35ac. Field	ApB (Appling LS)	4.0	0.1	5
Michael Back	ApB (Appling LS)	4.0	0.1	5
Michael House	ApB (Appling LS)	4.0	0.1	5
Calvins	CIB (Cecil SL)	4.0	0.3	5
Triangle Field	CIB (Cecil SL)	4.0	0.2	5
Alfalfa	VaB (Vance SL)	4.0	0.2	5
Big Field	VaB (Vance SL)	4.0	0.2	5
Walnut	VaB (Vance SL)	4.0	0.2	5

Crop period water soil loss

Field	Crop Year	Primary Crop	Starting Date (mm/dd/yyyy)	Ending Date (mm/dd/yyyy)	Crop Period Soil Loss (Ton/Acre)
Zone 1-4	2016	Corn, for grain	10/11/2015	9/22/2016	0.2
	2017	Soybeans, for grain	9/23/2016	10/10/2017	0.1
	2018	Corn, for grain	10/11/2017	9/22/2018	0.1
	2019	Soybeans, for grain	9/23/2018	10/10/2019	0.1
35ac. Field	2016	Soybeans, for grain	9/23/2015	10/10/2016	0.1
	2017	Corn, for grain	10/11/2016	9/22/2017	0.1
	2018	Soybeans, for grain	9/23/2017	10/10/2018	0.1
	2019	Corn, for grain	10/11/2018	9/22/2019	0.1
Michael Back	2016	Soybeans, for grain	9/23/2015	10/10/2016	0.1
	2017	Corn, for grain	10/11/2016	9/22/2017	0.1
	2018	Soybeans, for grain	9/23/2017	10/10/2018	0.1
	2019	Corn, for grain	10/11/2018	9/22/2019	0.1
Michael House	2016	Soybeans, for grain	9/23/2015	10/10/2016	0.1
	2017	Corn, for grain	10/11/2016	9/22/2017	0.1
	2018	Soybeans, for grain	9/23/2017	10/10/2018	0.1
	2019	Corn, for grain	10/11/2018	9/22/2019	0.1
Calvins	2016	Corn, for grain	10/11/2015	9/22/2016	0.4
	2017	Soybeans, for grain	9/23/2016	10/10/2017	0.2
	2018	Corn, for grain	10/11/2017	9/22/2018	0.3
	2019	Soybeans, for grain	9/23/2018	10/10/2019	0.2
Triangle Field	2016	Soybeans, for grain	9/23/2015	10/10/2016	0.2
	2017	Corn, for grain	10/11/2016	9/22/2017	0.2
	2018	Soybeans, for grain	9/23/2017	10/10/2018	0.2
	2019	Corn, for grain	10/11/2018	9/22/2019	0.2
Alfalfa	2016	Soybeans, for grain	9/23/2015	10/10/2016	0.2

Field	Crop Year	Primary Crop	Starting Date (mm/dd/yyyy)	Ending Date (mm/dd/yyyy)	Crop Period Soil Loss (Ton/Acre)
	2017	Corn, for grain	10/11/2016	9/22/2017	0.2
	2018	Soybeans, for grain	9/23/2017	10/10/2018	0.2
	2019	Corn, for grain	10/11/2018	9/22/2019	0.2
Big Field	2016	Soybeans, for grain	9/23/2015	10/10/2016	0.2
	2017	Corn, for grain	10/11/2016	9/22/2017	0.2
	2018	Soybeans, for grain	9/23/2017	10/10/2018	0.2
	2019	Corn, for grain	10/11/2018	9/22/2019	0.2
Walnut	2016	Soybeans, for grain	9/23/2015	10/10/2016	0.2
	2017	Corn, for grain	10/11/2016	9/22/2017	0.2
	2018	Soybeans, for grain	9/23/2017	10/10/2018	0.1
	2019	Corn, for grain	10/11/2018	9/22/2019	0.2

5.3. Nitrogen and Phosphorus Risk Analyses

South Carolina Phosphorus Index

Field	P Index	Rating	Maximum Application Rate (ton/ac/yr)
Zone 1-4	4.1	PI-1	3.0
35ac. Field	4.1	PI-1	3.5
Michael Back	3.4	PI-1	4.0
Michael House	3.4	PI-1	4.0
Calvins	4.0	PI-1	1.5
Triangle Field	3.8	PI-1	3.0
Alfalfa	3.6	PI-1	1.0
Big Field	3.9	PI-1	1.5

(1) Fields with 1.0 ton/ac/yr maximum application rate can be applied to every other year at a rate of 2 ton/ac.
(2) Fields with 1.5 ton/ac/yr maximum application rate can be applied to at three times in four years at a rate of 2 ton/ac.

A risk assessment for off-field phosphorus transport was conducted for each field that may receive land-applied manure. The South Carolina Phosphorus Index rating was used in the evaluation and this includes:

1. Phosphorus source factors including soil test P and fertilizer or organic P application rates and method of application/incorporation,
2. Phosphorus Transport Characteristics, which include Soil Erosion, surface runoff, and subsurface drainage.
3. Buffer zone considerations – similar to transport characteristics.

Source data for these evaluations include soil tests, soil properties, runoff calculations, management practices, and P-application calculations embedded in the spreadsheet. When a multi-year crop sequence is defined, the crop with the greatest Phosphorus addition is used to calculate the Phosphorus Index. The result is a P-index rating ranging from PI-1 (low) to PI-4 (very high). The following table explains the indices and associated actions:

P Index rating	Interpretation	Recommended Nutrient Limitation
PI-1 Score<6	Low potential for P movement from this site given current management practices and site characteristics. There is a low probability of an adverse impact to surface waters from P losses on this site. Soil test P and P losses are likely to increase in future due to N-based nutrient management from animal manure.	Nitrogen
PI-2 Score 6-10	Medium potential for P movement from this site given current management practices and site characteristics. Practices should be introduced to reduce P losses by surface runoff, subsurface flow, and erosion.	2 x Phosphorus
PI-3 Score 11-25	High potential for P movement from this site given current management practices and site characteristics. All practicable management practices to reduce P losses through surface runoff, subsurface flow, or erosion should be implemented.	Phosphorus
PI-4 Score >25	Very high potential for P movement from this site given current management practices and site characteristics. Active remediation techniques should be implemented in an effort to reduce the P loss potential from this site.	No manure

5.4. Additional Field Data Required by Risk Assessment Procedure(s)

South Carolina Phosphorus Index

Field	Distance to Water (Feet)	Land Use	No-P-Zone Slope	No-P-Zone Hydrologic Soil Group	No-P-Zone Land Use
Zone 1-4	100	Row crops - SR + CR, good	2-4%	B	Row crops - SR + CR, good
35ac. Field	524	Row crops - SR + CR, good	2-4%	B	Row crops - SR + CR, good
Michael Back	100	Row crops - SR + CR, good	2-4%	B	Brush-weed-grass mix - fair
Michael House	100	Row crops - SR + CR, good	2-4%	B	Brush-weed-grass mix - fair
Calvins	100	Row crops - SR + CR, good	2-4%	B	Woods - good
Triangle Field	1,473	Row crops - SR + CR, good	2-4%	B	Row crops - SR + CR, good
Alfalfa	619	Row crops - SR + CR, good	2-4%	C	Row crops - SR + CR, good
Big Field	154	Row crops - SR + CR, good	2-4%	C	Row crops - SR + CR, good
Walnut	100	Row crops - SR + CR, good	2-4%	C	Row crops - SR + CR, good

Section 6. Nutrient Management

6.1. Field Information

Field ID	Total Acres	Spreadable Acres	County	Predominant Soil Type	Watershed Code
Zone 1-4	52.1	49.1	Laurens	ApB (Appling LS)	030501091204
35ac. Field	35.8	35.8	Laurens	ApB (Appling LS)	030501091204
Michael Back	15.6	14.6	Laurens	ApB (Appling LS)	030501091204
Michael House	30.5	22.9	Laurens	ApB (Appling LS)	030501091204
Calvins	21.4	21.2	Laurens	CIB (Cecil SL)	030501091204
Triangle Field	26.6	26.6	Laurens	CIB (Cecil SL)	030501091204
Alfalfa	9.7	8.3	Laurens	VaB (Vance SL)	030501091204
Big Field	10.0	8.2	Laurens	VaB (Vance SL)	030501091204
Walnut	6.1	6.0	Laurens	VaB (Vance SL)	030501091204

6.2. Manure Application Setback Distances

DHEC setback requirements for animal manure utilization areas for "Other Than Swine":

1. Potable Wells - 200 feet
2. Ditches draining into ephemeral and intermittent streams - 50 feet
3. Waters of the state and ditches and swales that drain to waters of the state - 100 feet
4. Ephemeral and intermittent streams:
    1. Spray Irrigation - 100 feet
    2. Incorporation - 75 feet
    3. Injection - 50 feet
    4. Incorporation within 24 hours - 50 feet
5. Permanent inhabited residence - 300 feet
    1. Spray Irrigation - 300 feet
    2. Injected or Immed. Incorporation – 0 feet
    3. Reduced by owner consent

6.3. Soil Test Data

Field	Test Year	OM (%)	P Test Used	P	K	Mg	Ca	Units	Soil pH	Buffer pH	CEC (meq/100g)
Zone 1-4	2016	1.4	Mehlich-1	103	125	164	1,428	lbs/a	6.3	7.9	4.9
35ac. Field	2016	0.6	Mehlich-1	91	69	147	1,130	lbs/a	6.3		3.9
Michael Back	2016	0.9	Mehlich-1	33	105	121	958	lbs/a	5.9	7.9	3.6
Michael House	2016	0.9	Mehlich-1	41	116	133	934	lbs/a	5.9	7.9	3.6
Calvins	2016	1.2	Mehlich-1	91	202	334	1,414	lbs/a	6.4		5.7
Triangle Field	2016	0.9	Mehlich-1	27	67	147	1,130	lbs/a	6.3		3.9
Alfalfa	2016	1.7	Mehlich-1	73	151	189	1,034	lbs/a	5.3	7.8	5.2
Big Field	2016	1.5	Mehlich-1	134	138	448	1,834	lbs/a	6.9		6.7
Walnut	2016	1.7	Mehlich-1	19	72	164	1,128	lbs/a	5.6	7.8	4.7

Soil analysis included on the following pages.

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Grower: CALVIN YOUNG

SOIL ANALYSIS REPORT

Analytical Method(s): Lime Index Mehlich I Hoskins Buffer Water pH

Date Received: 04/01/2016 Date Of Analysis: 04/04/2016 Date Of Report: 04/04/2016

Sample ID / Field ID	Lab Number	OM %	W/V Soil Class	ENR lbs/A	Phosphorus M3 lbs/A	Rate	lbs/A	Rate	lbs/A	Rate	Potassium K lbs/A	Rate	Magnesium Mg lbs/A	Rate	Calcium Ca lbs/A	Rate	Sodium Na lbs/A	Rate	pH Soil pH	Buffer Index	Acidity H meq/100g	C.E.C meq/100g
9 35 Ac.	04417	0.6		66	91	H					69	L	147	M	1130	H			6.3		0.4	3.9
10 TRIANGLE	04418	0.9		63	27	L					67	L	130	M	930	H			6.0	7.86	0.5	3.5
11 BAKERFIELD	04419	0.9		63	33	M					106	M	121	L	956	H			5.9	7.87	0.6	3.6
12 MICHAELS House	04420	0.9		63	41	M					116	M	133	M	934	H			5.9	7.87	0.6	3.8
13 JK Lot 85	04421	0.6		66	91	H					125	H	168	M	1272	H			6.7		0.2	4.5

Sample ID / Field ID	Percent Base Saturation K %	Mg %	Ca %	Na %	H %	Nitrate NO_3N lbs/A	Rate	Sulfur S lbs/A	Rate	Zinc Zn lbs/A	Rate	Manganese Mn lbs/A	Rate	Iron Fe lbs/A	Rate	Copper Cu lbs/A	Rate	Boron B lbs/A	Rate	Soluble Salts SS mmhos	Rate	Chloride Cl lbs/A	Rate	Aluminum Al lbs/A
9	2.3	15.7	72.4		10.3					12.4	H	33	M			1.5	L							
10	2.6	15.5	66.4		14.3					8.9	H	47	H			1.3	L							
11	3.7	14.0	68.6		13.7					6.2	M	53	H			0.9	L							
12	4.1	15.4	64.9		15.7					7.8	H	45	H			1.8	L							
13	3.7	16.0	74.0		4.7					12.4	H	42	M			1.4	L							

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

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

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

Analysis prepared by: Waypoint Analytical Carolina, Inc.

by: Pearle McGreary

Pearle McGreary

1604

Report Number: 16-082-0601
Account Number: 06554

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Grower: CALVIN YOUNG

Submitted By: A MCGEE

SOIL ANALYSIS REPORT

Analytical Method(s): Lime Index (Mehlich I), Hustin Meter, Water pH

Date Received: 03/22/2016 Date Of Analysis: 03/23/2016 Date Of Report: 03/23/2016

Sample ID / Field ID	Lab Number	OM %	W/V Soil Class	ENR lbs/A	Phosphorus M lbs/A Rate	Phosphorus lbs/A Rate	Phosphorus lbs/A Rate	Potassium K lbs/A Rate	Magnesium Mg lbs/A Rate	Calcium Ca lbs/A Rate	Sodium Na lbs/A Rate	pH Soil pH	pH Buffer Index	Acidity H meq/100g	C.E.C meq/100g
6 ZONE 2	01056	1.2		68	76 H			119 M	161 M	1250 H		8.1	7.67	0.5	4.5
7 ZONE 3	01057	1.5		72	134 VH			143 H	180 L	1656 H		6.4		0.5	5.6
8 ZONE 4	01058	1.2		67	103 H			116 M	178 M	1412 H		8.3		0.5	4.9

Sample ID / Field ID	Percent Base Saturation K %	Mg %	Ca %	Na %	H %	Mineral KCl,M lbs/A Rate	Sulfur S lbs/A Rate	Zinc Zn lbs/A Rate	Manganese Mn lbs/A Rate	Iron Fe lbs/A Rate	Copper Cu lbs/A Rate	Boron B lbs/A Rate	Soluble Salts SS mmhos Rate	Chloride Cl lbs/A Rate	Aluminum Al lbs/A
6	2.4	14.0	70.0		13.3			10.1 H	25 M		1.8 L				
7	3.3	18.4	73.9		8.8			13.8 H	28 M		1.9 L				
8	3.0	15.0	72.0		10.2			13.1 H	28 M		2.0 L				

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

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

This report applies to sample(s) tested. Samples are retained a maximum of 30 days after testing.

Analysis prepared by: Waypoint Analytical Carolina, Inc.

by: Paula McGrowy

Paula McGrowy

1605

Report Number: 16-082-0601
Account Number: 06554

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Grower: CALVIN YOUNG

Submitted By: A MCGEE

SOIL ANALYSIS REPORT

Analytical Method(s): Lime Index: Mehlich I Humic Matter Water pH

Date Received: 03/22/2016 Date Of Analysis: 03/23/2016 Date Of Report: 03/23/2016

Sample ID / Field ID	Lab Number	OM %	W/V Soil Class	ENR lbs/A	Phosphorus M1 lbs/A	Rate	lbs/A	Rate	lbs/A	Rate	Potassium K lbs/A	Rate	Magnesium Mg lbs/A	Rate	Calcium Ca lbs/A	Rate	Sodium Na lbs/A	Rate	pH Soil pH	Buffer Index	Acidity H meq/100g	C.E.C meq/100g
1 ALFALFA	01051	1.7		77	73	H					151	H	169	L	1034	M			5.3	7.77	1.6	6.2
2 BIL FIELD	01052	1.5		70	134	VH					138	H	448	M	1834	H			6.9		0.1	6.7
CALVIN BACK FIELD	01053	1.2		68	91	H					202	H	334	M	1414	M			6.4		0.5	5.7
4 WALNUT	01054	1.7		77	19	L					72	M	184	M	1128	H			5.6	7.32	1.1	4.7
6 ZONE 1	01055	1.5		73	120	H					122	M	169	M	1335	H			6.9		0.5	4.7

Sample ID / Field ID	Percent Base Saturation K %	Mg %	Ca %	Na %	H %	Nitrate NO_3-N lbs/A	Rate	Sulfur S lbs/A	Rate	Zinc Zn lbs/A	Rate	Manganese Mn lbs/A	Rate	Iron Fe lbs/A	Rate	Copper Cu lbs/A	Rate	Boron B lbs/A	Rate	Soluble Salts SS mmhos	Rate	Chloride Cl lbs/A	Rate	Aluminum Al lbs/A
1	2.7	13.2	48.7		35.8					6.9	H	45	H			0.9	L							
2	2.8	27.9	68.4		1.5					14.7	H	42	H			0.9	L							
3	4.6	24.4	62.0		8.8					12.5	H	41	M			3.0	L							
4	2.0	14.8	60.0		23.4					4.6	M	39	M			0.6	L							
5	3.3	13.3	73.7		10.6					11.4	H	32	M			2.0	L							

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

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

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

Analysis prepared by: Waypoint Analytical Carolina, Inc.

by: Paula McGrory

Paula McGrory

4/12/16

1606

6.4. Manure Nutrient Analyses

Manure Source	Dry Matter (%)	Total N	NH_4-N	Total P_2O_5	Total K_2O	Avail. P_2O_5	Avail. K_2O	Units	Analysis Source and Date
Broiler Houses		36.0		35.0	30.0	35.0	30.0	Lb/Ton	AWFMH Estimate
Stacking Shed 1		36.0		35.0	30.0	35.0	30.0	Lb/Ton	AWFMH Estimate
Stacking Shed 2		36.0		35.0	30.0	35.0	30.0	Lb/Ton	AWFMH Estimate

(1) Entered analysis may be the average of several individual analyses.
(2) South Carolina assumes that 100% of manure phosphorus and 100% of manure potassium is crop available. First-year per-acre nitrogen availability for individual manure applications is given in the Planned Nutrient Applications table. For more information about nitrogen availability in South Carolina, see Chapter 3b, "Poultry Manure Production and Nutrient Content," Clemson University (http://www.clemson.edu/extension/livestock/camm/camm_files/poultry/pch3b_00.pdf).

6.5. Planned Crops and Fertilizer Recommendations

Field	Crop Year	Planned Crop	Yield Goal (per Acre)	N Rec (Lbs/A)	P_2O_5 Rec (Lbs/A)	K_2O Rec (Lbs/A)	N Removed (Lbs/A)	P_2O_5 Removed (Lbs/A)	K_2O Removed (Lbs/A)
Zone 1-4	2016	Corn, for grain	160.0 Bu	125	0	60	144	70	43
Zone 1-4	2017	Wheat, for grain*	50.0 Bu	90	0	40	63	25	19
Zone 1-4	2017	Soybeans, for grain	50.0 Bu	0	0	50	188	40	74
Zone 1-4	2018	Corn, for grain	160.0 Bu	125	0	60	144	70	43
Zone 1-4	2019	Wheat, for grain*	50.0 Bu	90	0	40	63	25	19
Zone 1-4	2019	Soybeans, for grain	50.0 Bu	0	0	50	188	40	74
35ac. Field	2016	Wheat, for grain*	50.0 Bu	90	0	80	63	25	19
35ac. Field	2016	Soybeans, for grain	50.0 Bu	0	0	100	188	40	74
35ac. Field	2017	Corn, for grain	150.0 Bu	125	0	100	135	66	41
35ac. Field	2018	Wheat, for grain*	50.0 Bu	90	0	80	63	25	19
35ac. Field	2018	Soybeans, for grain	50.0 Bu	0	0	100	188	40	74
35ac. Field	2019	Corn, for grain	150.0 Bu	125	0	100	135	66	41
Michael Back	2016	Wheat, for grain*	50.0 Bu	90	40	40	63	25	19
Michael Back	2016	Soybeans, for grain	50.0 Bu	0	50	50	188	40	74
Michael Back	2017	Corn, for grain	150.0 Bu	125	50	60	135	66	41
Michael Back	2018	Wheat, for grain*	50.0 Bu	90	40	40	63	25	19
Michael Back	2018	Soybeans, for grain	50.0 Bu	0	50	50	188	40	74
Michael Back	2019	Corn, for grain	150.0 Bu	125	50	60	135	66	41
Michael House	2016	Wheat, for grain*	50.0 Bu	90	0	40	63	25	19
Michael House	2016	Soybeans, for grain	50.0 Bu	0	0	50	188	40	74
Michael House	2017	Corn, for grain	150.0 Bu	125	0	60	135	66	41
Michael House	2018	Wheat, for grain*	50.0 Bu	90	0	40	63	25	19
Michael House	2018	Soybeans, for grain	50.0 Bu	0	0	50	188	40	74
Michael House	2019	Corn, for grain	150.0 Bu	125	0	60	135	66	41
Calvins	2016	Corn, for grain	160.0 Bu	125	0	30	144	70	43
Calvins	2017	Wheat, for grain*	50.0 Bu	90	0	0	63	25	19
Calvins	2017	Soybeans, for grain	50.0 Bu	0	0	0	188	40	74
Calvins	2018	Corn, for grain	160.0 Bu	125	0	30	144	70	43
Calvins	2019	Wheat, for grain*	50.0 Bu	90	0	0	63	25	19
Calvins	2019	Soybeans, for grain	50.0 Bu	0	0	0	188	40	74
Triangle Field	2016	Wheat, for grain*	50.0 Bu	90	40	80	63	25	19
Triangle Field	2016	Soybeans, for grain	50.0 Bu	0	50	100	188	40	74
Triangle Field	2017	Corn, for grain	160.0 Bu	125	50	100	144	70	43
Triangle Field	2018	Wheat, for grain*	50.0 Bu	90	40	80	63	25	19
Triangle Field	2018	Soybeans, for grain	50.0 Bu	0	50	100	188	40	74
Triangle Field	2019	Corn, for grain	150.0 Bu	125	50	100	135	66	41
Alfalfa	2016	Wheat, for grain*	50.0 Bu	90	0	40	63	25	19
Alfalfa	2016	Soybeans, for grain	50.0 Bu	0	0	50	188	40	74
Alfalfa	2017	Corn, for grain	160.0 Bu	125	0	60	144	70	43
Alfalfa	2018	Wheat, for grain*	50.0 Bu	90	0	40	63	25	19
Alfalfa	2018	Soybeans, for grain	50.0 Bu	0	0	50	188	40	74

Field	Crop Year	Planned Crop	Yield Goal (per Acre)	N Rec (Lbs/A)	P_2O_5 Rec (Lbs/A)	K_2O Rec (Lbs/A)	N Removed (Lbs/A)	P_2O_5 Removed (Lbs/A)	K_2O Removed (Lbs/A)
Alfalfa	2019	Corn, for grain	160.0 Bu	125	0	60	144	70	43
Big Field	2016	Wheat, for grain*	50.0 Bu	90	0	40	63	25	19
Big Field	2016	Soybeans, for grain	50.0 Bu	0	0	50	188	40	74
Big Field	2017	Corn, for grain	160.0 Bu	125	0	60	144	70	43
Big Field	2018	Wheat, for grain*	50.0 Bu	90	0	40	63	25	19
Big Field	2018	Soybeans, for grain	50.0 Bu	0	0	50	188	40	74
Big Field	2019	Corn, for grain	160.0 Bu	125	0	60	144	70	43
Walnut	2016	Wheat, for grain*	50.0 Bu	90	80	40	63	25	19
Walnut	2016	Soybeans, for grain	50.0 Bu	0	100	50	188	40	74
Walnut	2017	Corn, for grain	160.0 Bu	125	80	60	144	70	43
Walnut	2018	Wheat, for grain*	50.0 Bu	90	80	40	63	25	19
Walnut	2018	Soybeans, for grain	50.0 Bu	0	100	50	188	40	74
Walnut	2019	Corn, for grain	160.0 Bu	125	80	60	144	70	43

* Unharvested cover crop or first crop in double-crop system.
[a] Custom fertilizer recommendation.

6.6. Manure Application Planning Calendar – May 2016 through April 2017

Field	Total Acres	Spread Acres	Predominant Soil Type	Primary 2016 Crop (Prev. Primary Crop)	May '16	Jun '16	Jul '16	Aug '16	Sep '16	Oct '16	Nov '16	Dec '16	Jan '17	Feb '17	Mar '17	Apr '17
Zone 1-4	52.1	49.1	Appling LS (ApB 2-6%)	Corn, for grain (Soybeans, for grain)												
35ac. Field	35.8	35.8	Appling LS (ApB 2-6%)	Soybeans, for grain (Corn, for grain)												
Michael Back	15.6	14.6	Appling LS (ApB 2-6%)	Soybeans, for grain (Corn, for grain)												
Michael House	30.5	22.9	Appling LS (ApB 2-6%)	Soybeans, for grain (Corn, for grain)												
Calvins	21.4	21.2	Cecil SL (CIB 2-6%)	Corn, for grain (Soybeans, for grain)												
Triangle Field	26.6	26.6	Cecil SL (CIB 2-6%)	Soybeans, for grain (Corn, for grain)												
Alfalfa	9.7	8.3	Vance SL (VaB 2-6%)	Soybeans, for grain (Corn, for grain)												
Big Field	10.0	8.2	Vance SL (VaB 2-6%)	Soybeans, for grain (Corn, for grain)												
Walnut	6.1	6.0	Vance SL (VaB 2-6%)	Soybeans, for grain (Corn, for grain)												
Total	*207.8*	*192.7*				*80.6*						*19.7*				

No. indicates total loads
"X" indicates other manure apps

Manure Application Planning Calendar – May 2017 through April 2018

Field	Total Acres	Spread Acres	Predominant Soil Type	Primary 2017 Crop (Prev. Primary Crop)	May '17	Jun '17	Jul '17	Aug '17	Sep '17	Oct '17	Nov '17	Dec '17	Jan '18	Feb '18	Mar '18	Apr '18
Zone 1-4	52.1	49.1	Appling LS (ApB 2-6%)	Soybeans, for grain (Corn, for grain)												29.5
35ac. Field	35.8	35.8	Appling LS (ApB 2-6%)	Corn, for grain (Soybeans, for grain)						14.4						
Michael Back	15.6	14.6	Appling LS (ApB 2-6%)	Corn, for grain (Soybeans, for grain)						5.9						
Michael House	30.5	22.9	Appling LS (ApB 2-6%)	Corn, for grain (Soybeans, for grain)						9.2						
Calvins	21.4	21.2	Cecil SL (CIB 2-6%)	Soybeans, for grain (Corn, for grain)												8.5
Triangle Field	26.6	26.6	Cecil SL (CIB 2-6%)	Corn, for grain (Soybeans, for grain)						10.7						
Alfalfa	9.7	8.3	Vance SL (VaB 2-6%)	Corn, for grain (Soybeans, for grain)												
Big Field	10.0	8.2	Vance SL (VaB 2-6%)	Corn, for grain (Soybeans, for grain)						3.3						
Walnut	6.1	6.0	Vance SL (VaB 2-6%)	Corn, for grain (Soybeans, for grain)						2.4						
Total	*207.8*	*192.7*			*70.5*					*45.9*						*38.0*

No. indicates total loads
"X" indicates other manure apps

Manure Application Planning Calendar – May 2018 through April 2019

Field	Total Acres	Spread Acres	Predominant Soil Type	Primary 2018 Crop (Prev. Primary Crop)	May '18	Jun '18	Jul '18	Aug '18	Sep '18	Oct '18	Nov '18	Dec '18	Jan '19	Feb '19	Mar '19	Apr '19
Zone 1-4	52.1	49.1	Appling LS (ApB 2-6%)	Corn, for grain (Soybeans, for grain)						19.7						
35ac. Field	35.8	35.8	Appling LS (ApB 2-6%)	Soybeans, for grain (Corn, for grain)												21.5
Michael Back	15.6	14.6	Appling LS (ApB 2-6%)	Soybeans, for grain (Corn, for grain)												8.8
Michael House	30.5	22.9	Appling LS (ApB 2-6%)	Soybeans, for grain (Corn, for grain)												13.8
Calvins	21.4	21.2	Cecil SL (CIB 2-6%)	Corn, for grain (Soybeans, for grain)						8.5						
Triangle Field	26.6	26.6	Cecil SL (CIB 2-6%)	Soybeans, for grain (Corn, for grain)												16.0
Alfalfa	9.7	8.3	Vance SL (VaB 2-6%)	Soybeans, for grain (Corn, for grain)												3.4
Big Field	10.0	8.2	Vance SL (VaB 2-6%)	Soybeans, for grain (Corn, for grain)												3.3
Walnut	6.1	6.0	Vance SL (VaB 2-6%)	Soybeans, for grain (Corn, for grain)												3.7
Total	*207.8*	*192.7*								*28.2*						*70.5*

No. indicates total loads
"X" indicates other manure apps

Manure Application Planning Calendar – May 2019 through April 2020

Field	Total Acres	Spread Acres	Predominant Soil Type	Primary 2019 Crop (Prev. Primary Crop)	May '19	Jun '19	Jul '19	Aug '19	Sep '19	Oct '19	Nov '19	Dec '19	Jan '20	Feb '20	Mar '20	Apr '20
Zone 1-4	52.1	49.1	Appling LS (ApB 2-6%)	Soybeans, for grain (Corn, for grain)												
35ac. Field	35.8	35.8	Appling LS (ApB 2-6%)	Corn, for grain (Soybeans, for grain)												
Michael Back	15.6	14.6	Appling LS (ApB 2-6%)	Corn, for grain (Soybeans, for grain)												
Michael House	30.5	22.9	Appling LS (ApB 2-6%)	Corn, for grain (Soybeans, for grain)												
Calvins	21.4	21.2	Cecil SL (CIB 2-6%)	Soybeans, for grain (Corn, for grain)												
Triangle Field	26.6	26.6	Cecil SL (CIB 2-6%)	Corn, for grain (Soybeans, for grain)												
Alfalfa	9.7	8.3	Vance SL (VaB 2-6%)	Corn, for grain (Soybeans, for grain)												
Big Field	10.0	8.2	Vance SL (VaB 2-6%)	Corn, for grain (Soybeans, for grain)												
Walnut	6.1	6.0	Vance SL (VaB 2-6%)	Corn, for grain (Soybeans, for grain)												
Total	*207.8*	*192.7*														

No. indicates total loads
"X" indicates other manure apps

6.7. Planned Nutrient Applications (Manure-spreadable Area)

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P_2O_5 (Lbs/A)	Avail K_2O (Lbs/A)
Zone 1-4	May 2016	Corn, for grain	30-0-0	Surface broadcast	1-yr N	20 Gal		982 Gal	49.1	65	0	0
Zone 1-4	Jun 2016	Corn, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	3 Ton	29.5 Lds	147.5 Ton	49.2	62	105	90
Zone 1-4	Dec 2016	Wheat, for grain	Stacking Shed 2	Spreader, Not incorporated	Custom	2 Ton	19.7 Lds	98.5 Ton	49.3	41	70	60
Zone 1-4	Feb 2017	Wheat, for grain	30-0-0	Surface broadcast	Supp. N	15 Gal		736 Gal	49.1	49	0	0
Zone 1-4	Apr 2018	Corn, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	3 Ton	29.5 Lds	147.5 Ton	49.2	62	105	90
Zone 1-4	May 2018	Corn, for grain	30-0-0	Surface broadcast	Supp. N	20 Gal		982 Gal	49.1	65	0	0
Zone 1-4	Oct 2018	Wheat, for grain	Stacking Shed 2	Spreader, Not incorporated	Custom	2 Ton	19.7 Lds	98.5 Ton	49.3	41	70	60
Zone 1-4	Feb 2019	Wheat, for grain	30-0-0	Surface broadcast	Supp. N	15 Gal		736 Gal	49.1	49	0	0
Zone 1-4	Apr 2020	Corn, for grain	Stacking Shed 2	Spreader, Not incorporated	Custom	3 Ton	29.5 Lds	147.5 Ton	49.2	62	105	90
35ac. Field	Jun 2016	Soybeans, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	2 Ton	14.4 Lds	72 Ton	36.0	41	70	60
35ac. Field	Apr 2017	Corn, for grain	30-0-0	Surface broadcast	1-yr N	20 Gal		716 Gal	35.8	65	0	0
35ac. Field	May 2017	Corn, for grain	Stacking Shed 2	Spreader, Not incorporated	Custom	3 Ton	21.5 Lds	107.5 Ton	35.8	62	105	90
35ac. Field	Oct 2017	Wheat, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	2 Ton	14.4 Lds	72 Ton	36.0	41	70	60
35ac. Field	Feb 2018	Wheat, for grain	30-0-0	Surface broadcast	Supp. N	15 Gal		537 Gal	35.8	49	0	0
35ac. Field	Apr 2019	Corn, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	3 Ton	21.5 Lds	107.5 Ton	35.8	62	105	90
35ac. Field	May 2019	Corn, for grain	30-0-0	Surface broadcast	Supp. N	20 Gal		716 Gal	35.8	65	0	0
35ac. Field	Oct 2019	Soybeans, for grain	Stacking Shed 2	Spreader, Not incorporated	Custom	2 Ton	14.4 Lds	72 Ton	36.0	41	70	60
35ac. Field	Feb 2020	Wheat, for grain	30-0-0	Surface broadcast	Supp. N	15 Gal		537 Gal	35.8	49	0	0
Michael Back	Jun 2016	Soybeans, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	2 Ton	5.9 Lds	29.5 Ton	14.8	41	70	60
Michael Back	Apr 2017	Corn, for grain	30-0-0	Surface broadcast	1-yr N	20 Gal		292 Gal	14.6	65	0	0
Michael Back	May 2017	Corn, for grain	Stacking Shed 2	Spreader, Not incorporated	Custom	3 Ton	8.8 Lds	44 Ton	14.7	62	105	90
Michael Back	Oct 2017	Wheat, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	2 Ton	5.9 Lds	29.5 Ton	14.8	41	70	60
Michael Back	Feb 2018	Wheat, for grain	30-0-0	Surface broadcast	Supp. N	15 Gal		219 Gal	14.6	49	0	0
Michael Back	Apr 2019	Corn, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	3 Ton	8.8 Lds	44 Ton	14.7	62	105	90
Michael Back	May 2019	Corn, for grain	30-0-0	Surface broadcast	Supp. N	20 Gal		292 Gal	14.6	65	0	0
Michael Back	Oct 2019	Soybeans, for grain	Stacking Shed 2	Spreader, Not incorporated	Custom	2 Ton	5.9 Lds	29.5 Ton	14.8	41	70	60
Michael Back	Feb 2020	Wheat, for grain	30-0-0	Surface broadcast	Supp. N	15 Gal		219 Gal	14.6	49	0	0
Michael House	Jun 2016	Soybeans, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	2 Ton	9.2 Lds	46 Ton	23.0	41	70	60

Field	App Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P_2O_5 (Lbs/A)	Avail K_2O (Lbs/A)
Michael House	Apr 2017	Corn, for grain	30-0-0	Surface broadcast	1-yr N	19 Gal		435 Gal	22.9	62	0	0
Michael House	May 2017	Corn, for grain	Stacking Shed 2	Spreader, Not incorporated	Custom	3 Ton	13.8 Lds	69 Ton	23.0	62	105	90
Michael House	Oct 2017	Wheat, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	2 Ton	9.2 Lds	46 Ton	23.0	41	70	60
Michael House	Feb 2018	Wheat, for grain	30-0-0	Surface broadcast	Supp. N	15 Gal		343 Gal	22.9	49	0	0
Michael House	Apr 2019	Corn, for grain	Stacking Shed 2	Spreader, Not incorporated	Custom	3 Ton	13.8 Lds	69 Ton	23.0	62	105	90
Michael House	May 2019	Corn, for grain	30-0-0	Surface broadcast	Supp. N	19 Gal		435 Gal	22.9	62	0	0
Michael House	Oct 2019	Soybeans, for grain	Stacking Shed 2	Spreader, Not incorporated	Custom	2 Ton	9.2 Lds	46 Ton	23.0	41	70	60
Michael House	Feb 2020	Wheat, for grain	30-0-0	Surface broadcast	Supp. N	15 Gal		343 Gal	22.9	49	0	0
Calvins	May 2016	Corn, for grain	30-0-0	Surface broadcast	1-yr N	26 Gal		551 Gal	21.2	85	0	0
Calvins	Jun 2016	Corn, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	2 Ton	8.5 Lds	42.5 Ton	21.3	41	70	60
Calvins	Feb 2017	Wheat, for grain	30-0-0	Surface broadcast	1-yr N	28 Gal		594 Gal	21.2	91	0	0
Calvins	Apr 2018	Corn, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	2 Ton	8.5 Lds	42.5 Ton	21.3	41	70	60
Calvins	May 2018	Corn, for grain	30-0-0	Surface broadcast	Supp. N	26 Gal		551 Gal	21.2	85	0	0
Calvins	Oct 2018	Wheat, for grain	Stacking Shed 2	Spreader, Not incorporated	Custom	2 Ton	8.5 Lds	42.5 Ton	21.3	41	70	60
Calvins	Feb 2019	Wheat, for grain	30-0-0	Surface broadcast	Supp. N	15 Gal		318 Gal	21.2	49	0	0
Calvins	Apr 2020	Corn, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	2 Ton	8.5 Lds	42.5 Ton	21.3	41	70	60
Triangle Field	Jun 2016	Soybeans, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	2 Ton	10.7 Lds	53.5 Ton	26.8	41	70	60
Triangle Field	Apr 2017	Corn, for grain	30-0-0	Surface broadcast	1-yr N	20 Gal		532 Gal	26.6	65	0	0
Triangle Field	May 2017	Corn, for grain	Stacking Shed 2	Spreader, Not incorporated	Custom	3 Ton	16 Lds	80 Ton	26.7	62	105	90
Triangle Field	Oct 2017	Wheat, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	2 Ton	10.7 Lds	53.5 Ton	26.8	41	70	60
Triangle Field	Feb 2018	Wheat, for grain	30-0-0	Surface broadcast	Supp. N	15 Gal		399 Gal	26.6	49	0	0
Triangle Field	Apr 2019	Corn, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	3 Ton	16 Lds	80 Ton	26.7	62	105	90
Triangle Field	May 2019	Corn, for grain	30-0-0	Surface broadcast	Supp. N	20 Gal		532 Gal	26.6	65	0	0
Triangle Field	Oct 2019	Soybeans, for grain	Stacking Shed 2	Spreader, Not incorporated	Custom	2 Ton	10.7 Lds	53.5 Ton	26.8	41	70	60
Triangle Field	Feb 2020	Wheat, for grain	30-0-0	Surface broadcast	Supp. N	15 Gal		399 Gal	26.6	49	0	0
Alfalfa	Apr 2017	Corn, for grain	30-0-0	Surface broadcast	1-yr N	26 Gal		216 Gal	8.3	85	0	0
Alfalfa	May 2017	Corn, for grain	Stacking Shed 2	Spreader, Not incorporated	Custom	2 Ton	3.4 Lds	17 Ton	8.5	41	70	60
Alfalfa	Feb 2018	Wheat, for grain	30-0-0	Surface broadcast	1-yr N	28 Gal		232 Gal	8.3	91	0	0
Alfalfa	Apr 2019	Corn, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	2 Ton	3.4 Lds	17 Ton	8.5	41	70	60
Alfalfa	May 2019	Corn, for grain	30-0-0	Surface broadcast	Supp. N	26 Gal		216 Gal	8.3	85	0	0

Field	App Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov	Avail N (Lbs/A)	Avail P_2O_5 (Lbs/A)	Avail K_2O (Lbs/A)
Alfalfa	Feb 2020	Wheat, for grain	30-0-0	Surface broadcast	1-yr N	28 Gal		232 Gal	8.3	91	0	0
Big Field	Apr 2017	Corn, for grain	30-0-0	Surface broadcast	1-yr N	26 Gal		213 Gal	8.2	85	0	0
Big Field	May 2017	Corn, for grain	Stacking Shed 2	Spreader, Not incorporated	Custom	2 Ton	3.3 Lds	16.5 Ton	8.3	41	70	60
Big Field	Oct 2017	Wheat, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	2 Ton	3.3 Lds	16.5 Ton	8.3	41	70	60
Big Field	Feb 2018	Wheat, for grain	30-0-0	Surface broadcast	Supp. N	15 Gal		123 Gal	8.2	49	0	0
Big Field	Apr 2019	Corn, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	2 Ton	3.3 Lds	16.5 Ton	8.3	41	70	60
Big Field	May 2019	Corn, for grain	30-0-0	Surface broadcast	Supp. N	26 Gal		213 Gal	8.2	85	0	0
Big Field	Feb 2020	Wheat, for grain	30-0-0	Surface broadcast	1-yr N	28 Gal		230 Gal	8.2	91	0	0
Walnut	Jun 2016	Soybeans, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	2 Ton	2.4 Lds	12 Ton	6.0	41	70	60
Walnut	Apr 2017	Corn, for grain	30-0-0	Surface broadcast	1-yr N	20 Gal		120 Gal	6.0	65	0	0
Walnut	May 2017	Corn, for grain	Stacking Shed 2	Spreader, Not incorporated	Custom	3 Ton	3.7 Lds	18.5 Ton	6.2	62	105	90
Walnut	Oct 2017	Wheat, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	2 Ton	2.4 Lds	12 Ton	6.0	41	70	60
Walnut	Feb 2018	Wheat, for grain	30-0-0	Surface broadcast	Supp. N	15 Gal		90 Gal	6.0	49	0	0
Walnut	Apr 2019	Corn, for grain	Stacking Shed 1	Spreader, Not incorporated	Custom	3 Ton	3.7 Lds	18.5 Ton	6.2	62	105	90
Walnut	May 2019	Corn, for grain	30-0-0	Surface broadcast	Supp. N	19 Gal		114 Gal	6.0	62	0	0
Walnut	Oct 2019	Soybeans, for grain	Stacking Shed 2	Spreader, Not incorporated	Custom	2 Ton	2.4 Lds	12 Ton	6.0	41	70	60
Walnut	Feb 2020	Wheat, for grain	30-0-0	Surface broadcast	Supp. N	15 Gal		90 Gal	6.0	49	0	0

Planned Nutrient Applications (Non-manure-spreadable Area)

Field	App Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Total Amount Applied	Acres Cov	Avail N (Lbs/A)	Avail P_2O_5 (Lbs/A)	Avail K_2O (Lbs/A)
Zone 1-4	May 2016	Corn, for grain	30-0-0	Surface broadcast	1-yr N	20 Gal	60 Gal	3.0	65	0	0
Zone 1-4	Feb 2017	Wheat, for grain	30-0-0	Surface broadcast	1-yr N	15 Gal	45 Gal	3.0	49	0	0
Zone 1-4	May 2018	Corn, for grain	30-0-0	Surface broadcast	1-yr N	20 Gal	60 Gal	3.0	65	0	0
Zone 1-4	Feb 2019	Wheat, for grain	30-0-0	Surface broadcast	1-yr N	15 Gal	45 Gal	3.0	49	0	0
Michael Back	Apr 2017	Corn, for grain	30-0-0	Surface broadcast	1-yr N	20 Gal	20 Gal	1.0	65	0	0
Michael Back	Feb 2018	Wheat, for grain	30-0-0	Surface broadcast	1-yr N	15 Gal	15 Gal	1.0	49	0	0
Michael Back	May 2019	Corn, for grain	30-0-0	Surface broadcast	1-yr N	20 Gal	20 Gal	1.0	65	0	0
Michael Back	Feb 2020	Wheat, for grain	30-0-0	Surface broadcast	1-yr N	15 Gal	15 Gal	1.0	49	0	0
Michael House	Apr 2017	Corn, for grain	30-0-0	Surface broadcast	1-yr N	19 Gal	144 Gal	7.6	62	0	0

Field	App Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P_2O_5 (Lbs/A)	Avail K_2O (Lbs/A)
Michael House	Feb 2018	Wheat, for grain	30-0-0	Surface broadcast	1-yr N	15 Gal	114 Gal	7.6	49	0	0
Michael House	May 2019	Corn, for grain	30-0-0	Surface broadcast	1-yr N	19 Gal	144 Gal	7.6	62	0	0
Michael House	Feb 2020	Wheat, for grain	30-0-0	Surface broadcast	1-yr N	15 Gal	114 Gal	7.6	49	0	0
Calvins	May 2016	Corn, for grain	30-0-0	Surface broadcast	1-yr N	26 Gal	5 Gal	0.2	85	0	0
Calvins	Feb 2017	Wheat, for grain	30-0-0	Surface broadcast	1-yr N	28 Gal	6 Gal	0.2	91	0	0
Calvins	May 2018	Corn, for grain	30-0-0	Surface broadcast	1-yr N	26 Gal	5 Gal	0.2	85	0	0
Calvins	Feb 2019	Wheat, for grain	30-0-0	Surface broadcast	1-yr N	15 Gal	3 Gal	0.2	49	0	0
Alfalfa	Apr 2017	Corn, for grain	30-0-0	Surface broadcast	1-yr N	26 Gal	36 Gal	1.4	85	0	0
Alfalfa	Feb 2018	Wheat, for grain	30-0-0	Surface broadcast	1-yr N	28 Gal	39 Gal	1.4	91	0	0
Alfalfa	May 2019	Corn, for grain	30-0-0	Surface broadcast	1-yr N	26 Gal	36 Gal	1.4	85	0	0
Alfalfa	Feb 2020	Wheat, for grain	30-0-0	Surface broadcast	1-yr N	28 Gal	39 Gal	1.4	91	0	0
Big Field	Apr 2017	Corn, for grain	30-0-0	Surface broadcast	1-yr N	26 Gal	47 Gal	1.8	85	0	0
Big Field	Feb 2018	Wheat, for grain	30-0-0	Surface broadcast	1-yr N	15 Gal	27 Gal	1.8	49	0	0
Big Field	May 2019	Corn, for grain	30-0-0	Surface broadcast	1-yr N	26 Gal	47 Gal	1.8	85	0	0
Big Field	Feb 2020	Wheat, for grain	30-0-0	Surface broadcast	1-yr N	28 Gal	50 Gal	1.8	91	0	0
Walnut	Apr 2017	Corn, for grain	30-0-0	Surface broadcast	1-yr N	20 Gal	2 Gal	0.1	65	0	0
Walnut	Feb 2018	Wheat, for grain	30-0-0	Surface broadcast	1-yr N	15 Gal	1 Gal	0.1	49	0	0
Walnut	May 2019	Corn, for grain	30-0-0	Surface broadcast	1-yr N	19 Gal	2 Gal	0.1	62	0	0
Walnut	Feb 2020	Wheat, for grain	30-0-0	Surface broadcast	1-yr N	15 Gal	1 Gal	0.1	49	0	0

6.8. Field Nutrient Balance (Manure-spreadable Area)

Year	Field	Size	Crop	Yield Goal	Fertilizer Recs[1]			Nutrients Applied[2]			Balance After Recs[3]			Balance After Removal[4]	
		Acres		/Acre	N Lb/A	P_2O_5 Lb/A	K_2O Lb/A	N Lb/A	P_2O_5 Lb/A	K_2O Lb/A	N Lb/A	P_2O_5 Lb/A	K_2O Lb/A	P_2O_5 Lb/A	K_2O Lb/A
2016	Zone 1-4	49.1	Corn, for grain	160	125	0	60	127	105	90	2	105	30	35	47
2017	Zone 1-4	49.1	Wheat, for grain	50	90	0	40								
2017	Zone 1-4	49.1	Soybeans, for grain	50	0	0	50	90	70	60	0	175	0	40	14
2018	Zone 1-4	49.1	Corn, for grain	160	125	0	60	127	105	90	2	280	30	75	61
2019	Zone 1-4	49.1	Wheat, for grain	50	90	0	40								
2019	Zone 1-4	49.1	Soybeans, for grain	50	0	0	50	90	70	60	0	350	0	80	28
Total	**Zone 1-4**				**430**	**0**	**300**	**434**	**350**	**300**					
2016	35ac. Field	35.8	Wheat, for grain	50	90	0	80								
2016	35ac. Field	35.8	Soybeans, for grain	50	0	0	100	41	70	60	-49	70	-120	5	-33
2017	35ac. Field	35.8	Corn, for grain	150	125	0	100	127	105	90	2	175	-10	44	49
2018	35ac. Field	35.8	Wheat, for grain	50	90	0	80								
2018	35ac. Field	35.8	Soybeans, for grain	50	0	0	100	90	70	60	0	245	-120	49	16
2019	35ac. Field	35.8	Corn, for grain	150	125	0	100	127	105	90	2	350	-10	88	65
Total	**35ac. Field**				**430**	**0**	**560**	**385**	**350**	**300**					
2016	Michael Back	14.6	Wheat, for grain	50	90	40	40								
2016	Michael Back	14.6	Soybeans, for grain	50	0	50	50	42	71	61	-48	-19	-29	6	-32
2017	Michael Back	14.6	Corn, for grain	150	125	50	60	127	106	91	2	56	31	46	50
2018	Michael Back	14.6	Wheat, for grain	50	90	40	40								
2018	Michael Back	14.6	Soybeans, for grain	50	0	50	50	91	71	61	1	37	2	52	18
2019	Michael Back	14.6	Corn, for grain	150	125	50	60	127	106	91	2	93	33	92	68
Total	**Michael Back**				**430**	**280**	**300**	**387**	**354**	**304**					
2016	Michael House	22.9	Wheat, for grain	50	90	0	40								
2016	Michael House	22.9	Soybeans, for grain	50	0	0	50	41	70	60	-49	70	-30	5	-33
2017	Michael House	22.9	Corn, for grain	150	125	0	60	124	105	90	-1	175	30	44	49
2018	Michael House	22.9	Wheat, for grain	50	90	0	40								
2018	Michael House	22.9	Soybeans, for grain	50	0	0	50	90	70	60	0	245	0	49	16
2019	Michael House	22.9	Corn, for grain	150	125	0	60	124	105	90	-1	350	30	88	65
Total	**Michael House**				**430**	**0**	**300**	**379**	**350**	**300**					
2016	Calvins	21.2	Corn, for grain	160	125	0	30	126	70	60	1	70	30	0	17
2017	Calvins	21.2	Wheat, for grain	50	90	0	0								
2017	Calvins	21.2	Soybeans, for grain	50	0	0	0	91	0	0	1	70	30	-65	-76

Year	Field	Size	Crop	Yield Goal	Fertilizer Recs[1]			Nutrients Applied[2]			Balance After Recs[3]			Balance After Removal[4]	
		Acres		/Acre	N Lb/A	P_2O_5 Lb/A	K_2O Lb/A	N Lb/A	P_2O_5 Lb/A	K_2O Lb/A	N Lb/A	P_2O_5 Lb/A	K_2O Lb/A	P_2O_5 Lb/A	K_2O Lb/A
2018	Calvins	21.2	Corn, for grain	160	125	0	30	126	70	60	1	140	60	0	17
2019	Calvins	21.2	Wheat, for grain	50	90	0	0								
2019	Calvins	21.2	Soybeans, for grain	50	0	0	0	90	70	60	0	210	120	5	-16
Total	**Calvins**				**430**	**0**	**60**	**433**	**210**	**180**					
2016	Triangle Field	26.6	Wheat, for grain	50	90	40	80								
2018	Triangle Field	26.6	Soybeans, for grain	50	0	50	100	41	71	60	-49	-19	-120	6	-33
2017	Triangle Field	26.6	Corn, for grain	160	125	50	100	127	105	90	2	55	-10	41	47
2018	Triangle Field	26.6	Wheat, for grain	50	90	40	80								
2018	Triangle Field	26.6	Soybeans, for grain	50	0	50	100	90	71	60	0	36	-120	47	14
2019	Triangle Field	26.6	Corn, for grain	150	125	50	100	127	105	90	2	91	-10	86	63
Total	**Triangle Field**				**430**	**280**	**560**	**385**	**352**	**300**					
2016	Alfalfa	8.3	Wheat, for grain	50	90	0	40								
2016	Alfalfa	8.3	Soybeans, for grain	50	0	0	50	0	0	0	-90	0	-90	-65	-93
2017	Alfalfa	8.3	Corn, for grain	160	125	0	60	127	72	61	2	72	1	2	18
2018	Alfalfa	8.3	Wheat, for grain	50	90	0	40								
2018	Alfalfa	8.3	Soybeans, for grain	50	0	0	50	91	0	0	1	72	-89	-63	-75
2019	Alfalfa	8.3	Corn, for grain	160	125	0	60	127	72	61	2	144	1	2	18
Total	**Alfalfa**				**430**	**0**	**300**	**345**	**144**	**122**					
2016	Big Field	8.2	Wheat, for grain	50	90	0	40								
2016	Big Field	8.2	Soybeans, for grain	50	0	0	50	0	0	0	-90	0	-90	-65	-93
2017	Big Field	8.2	Corn, for grain	160	125	0	60	126	71	61	1	71	1	1	18
2018	Big Field	8.2	Wheat, for grain	50	90	0	40								
2018	Big Field	8.2	Soybeans, for grain	50	0	0	50	90	71	61	0	142	-28	7	-14
2019	Big Field	8.2	Corn, for grain	160	125	0	60	126	71	61	1	213	1	8	18
Total	**Big Field**				**430**	**0**	**300**	**342**	**213**	**183**					
2016	Walnut	6.0	Wheat, for grain	50	90	80	40								
2016	Walnut	6.0	Soybeans, for grain	50	0	100	50	41	70	60	-49	-110	-30	5	-33
2017	Walnut	6.0	Corn, for grain	160	125	80	60	129	108	93	4	28	33	43	50
2018	Walnut	6.0	Wheat, for grain	50	90	80	40								
2018	Walnut	6.0	Soybeans, for grain	50	0	100	50	90	70	60	0	-82	3	48	17
2019	Walnut	6.0	Corn, for grain	160	125	80	60	126	108	93	1	28	36	86	67
Total	**Walnut**				**430**	**520**	**300**	**386**	**356**	**306**					

Field Nutrient Balance (Non-manure-spreadable Area)

Year	Field	Size	Crop	Yield Goal	Fertilizer Recs[1]			Nutrients Applied[2]			Balance After Recs[3]			Balance After Removal[4]	
		Acres		/Acre	N Lb/A	P_2O_5 Lb/A	K_2O Lb/A	N Lb/A	P_2O_5 Lb/A	K_2O Lb/A	N Lb/A	P_2O_5 Lb/A	K_2O Lb/A	P_2O_5 Lb/A	K_2O Lb/A
2016	Zone 1-4	3.0	Corn, for grain	160	125	0	60	65	0	0	-60	0	-60	-70	-43
2017	Zone 1-4	3.0	Wheat, for grain	50	90	0	40								
2017	Zone 1-4	3.0	Soybeans, for grain	50	0	0	50	49	0	0	-41	0	-90	-65	-93
2018	Zone 1-4	3.0	Corn, for grain	160	125	0	60	65	0	0	-60	0	-60	-70	-43
2019	Zone 1-4	3.0	Wheat, for grain	50	90	0	40								
2019	Zone 1-4	3.0	Soybeans, for grain	50	0	0	50	49	0	0	-41	0	-90	-65	-93
Total	**Zone 1-4**				**430**	**0**	**300**	**228**	**0**	**0**					
2016	Michael Back	1.0	Wheat, for grain	50	90	40	40								
2016	Michael Back	1.0	Soybeans, for grain	50	0	50	50	0	0	0	-90	-90	-90	-65	-93
2017	Michael Back	1.0	Corn, for grain	150	125	50	60	65	0	0	-60	-50	-60	-66	-41
2018	Michael Back	1.0	Wheat, for grain	50	90	40	40								
2018	Michael Back	1.0	Soybeans, for grain	50	0	50	50	49	0	0	-41	-90	-90	-65	-93
2019	Michael Back	1.0	Corn, for grain	150	125	50	60	65	0	0	-60	-50	-60	-66	-41
Total	**Michael Back**				**430**	**280**	**300**	**179**	**0**	**0**					
2016	Michael House	7.6	Wheat, for grain	50	90	0	40								
2016	Michael House	7.6	Soybeans, for grain	50	0	0	50	0	0	0	-90	0	-90	-65	-93
2017	Michael House	7.6	Corn, for grain	150	125	0	60	62	0	0	-63	0	-60	-66	-41
2018	Michael House	7.6	Wheat, for grain	50	90	0	40								
2018	Michael House	7.6	Soybeans, for grain	50	0	0	50	49	0	0	-41	0	-90	-65	-93
2019	Michael House	7.6	Corn, for grain	150	125	0	60	62	0	0	-63	0	-60	-66	-41
Total	**Michael House**				**430**	**0**	**300**	**173**	**0**	**0**					
2016	Calvins	0.2	Corn, for grain	160	125	0	30	85	0	0	-40	0	-30	-70	-43
2017	Calvins	0.2	Wheat, for grain	50	90	0	0								
2017	Calvins	0.2	Soybeans, for grain	50	0	0	0	91	0	0	1	0	0	-65	-93
2018	Calvins	0.2	Corn, for grain	160	125	0	30	85	0	0	-40	0	-30	-70	-43
2019	Calvins	0.2	Wheat, for grain	50	90	0	0								
2019	Calvins	0.2	Soybeans, for grain	50	0	0	0	49	0	0	-41	0	0	-65	-93
Total	**Calvins**				**430**	**0**	**60**	**310**	**0**	**0**					

Year	Field	Size	Crop	Yield Goal	Fertilizer Recs[1]			Nutrients Applied[2]			Balance After Recs[3]			Balance After Removal[4]	
		Acres		/Acre	N Lb/A	P_2O_5 Lb/A	K_2O Lb/A	N Lb/A	P_2O_5 Lb/A	K_2O Lb/A	N Lb/A	P_2O_5 Lb/A	K_2O Lb/A	P_2O_5 Lb/A	K_2O Lb/A
2016	Alfalfa	1.4	Wheat, for grain	50	90	0	40								
2016	Alfalfa	1.4	Soybeans, for grain	50	0	0	50	0	0	0	-90	0	-90	-65	-93
2017	Alfalfa	1.4	Corn, for grain	160	125	0	60	85	0	0	-40	0	-60	-70	-43
2018	Alfalfa	1.4	Wheat, for grain	50	90	0	40								
2018	Alfalfa	1.4	Soybeans, for grain	50	0	0	50	91	0	0	1	0	-90	-65	-93
2019	Alfalfa	1.4	Corn, for grain	160	125	0	60	85	0	0	-40	0	-60	-70	-43
Total	**Alfalfa**				**430**	**0**	**300**	**261**	**0**	**0**					
2016	Big Field	1.8	Wheat, for grain	50	90	0	40								
2016	Big Field	1.8	Soybeans, for grain	50	0	0	50	0	0	0	-90	0	-90	-65	-93
2017	Big Field	1.8	Corn, for grain	160	125	0	60	85	0	0	-40	0	-60	-70	-43
2018	Big Field	1.8	Wheat, for grain	50	90	0	40								
2018	Big Field	1.8	Soybeans, for grain	50	0	0	50	49	0	0	-41	0	-90	-65	-93
2019	Big Field	1.8	Corn, for grain	160	125	0	60	85	0	0	-40	0	-60	-70	-43
Total	**Big Field**				**430**	**0**	**300**	**219**	**0**	**0**					
2016	Walnut	0.1	Wheat, for grain	50	90	80	40								
2016	Walnut	0.1	Soybeans, for grain	50	0	100	50	0	0	0	-90	-180	-90	-65	-93
2017	Walnut	0.1	Corn, for grain	160	125	80	60	65	0	0	-60	-80	-60	-70	-43
2018	Walnut	0.1	Wheat, for grain	50	90	80	40								
2018	Walnut	0.1	Soybeans, for grain	50	0	100	50	49	0	0	-41	-180	-90	-65	-93
2019	Walnut	0.1	Corn, for grain	160	125	80	60	62	0	0	-63	-80	-60	-70	-43
Total	**Walnut**				**430**	**520**	**300**	**176**	**0**	**0**					

[1] Fertilizer Recs are the crop fertilizer recommendations. The N rec accounts for any N credit from previous legume crop.

[2] Nutrients Applied are the nutrients expected to be available to the crop from that year's manure applications plus nutrients from that year's commercial fertilizer applications and nitrates from irrigation water. With a double-crop year, the total nutrients applied for both crops and the year's balances are listed on the second crop's line.

[3] For N, Nutrients Applied minus Fertilizer Recs for indicated crop year. Also includes amount of residual N expected to become available that year from prior years' manure applications. For P_2O_5 and K_2O, Nutrients Applied minus Fertilizer Recs *through* the indicated crop year, with positive balances carried forward to subsequent years. Negative values indicate a potential need to apply additional nutrients.

[4] Nutrients Applied minus amount removed by harvested portion of crop through the indicated year. Positive balances are carried forward to subsequent years.

[¤] Indicates a custom fertilizer recommendation in the Fertilizer Recs column.

[°] Indicates in the Balance After Recs N column that the legume crop is assumed to utilize some or all of the supplied N.

[†] Indicates in the Balance After Recs N column that the value includes residual N expected to become available that year from prior years' manure applications.

6.9. Projected Phosphorus Change

Projected Soil P Levels

Plan File: Z:\CNMPs\South Carolina\Young Jim SC\James Young Jr. MMP.mmp ***Last Saved:*** 5/20/2016
Operation: Jim Young Broilers ***State:*** South Carolina ***Init. File Rev:*** 11/17/2015

Field ID	*Sub ID*	*P Level At Start Of Plan*	*P Level At End Of Plan*	*Units*
Zone 1-4		103	112	Lb/A
35ac. Field		91	101	Lb/A
Michael Back		33	43	Lb/A
Michael House		41	51	Lb/A
Calvins		91	85	Lb/A
Triangle Field		27	36	Lb/A
Alfalfa		73	59	Lb/A
Big Field		134	128	Lb/A
Walnut		19	28	Lb/A

Notes
Equations used to determine change in soil test P:
Change in P (Lb/A) = Round(IIf(MiscA=1 OR MiscA=2, 0.375, IIf(MiscA=3 OR MiscA=4 OR IsNull(MiscA), 0.25, 0.125)) * NetP2O5 / 2.29)

6.10. Manure Inventory Annual Summary

Manure Source	Plan Period	On Hand at Start of Period	Total Generated	Total Imported	Total Transferred In	Total Applied	Total Exported	Total Transferred Out	On Hand at End of Period	Units
Broiler Houses	May '16 - Apr '17	1,405	1,449	0	0	0	0	1,288	1,566	Ton
Stacking Shed 1	May '16 - Apr '17	0	0	0	739	403	336	0	0	Ton
Stacking Shed 2	May '16 - Apr '17	0	0	0	549	99	0	0	451	Ton
All Sources	**May '16 - Apr '17**	**1,405**	**1,449**	**0**	**1,288**	**502**	**336**	**1,288**	**2,017**	**Ton**
Broiler Houses	May '17 - Apr '18	1,566	1,449	0	0	0	374	1,464	1,178	Ton
Stacking Shed 1	May '17 - Apr '18	0	0	0	970	420	550	0	0	Ton
Stacking Shed 2	May '17 - Apr '18	451	0	0	494	353	550	0	42	Ton
All Sources	**May '17 - Apr '18**	**2,017**	**1,449**	**0**	**1,464**	**772**	**1,474**	**1,464**	**1,220**	**Ton**
Broiler Houses	May '18 - Apr '19	1,178	1,449	0	0	0	0	1,288	1,339	Ton
Stacking Shed 1	May '18 - Apr '19	0	0	0	644	284	300	0	61	Ton
Stacking Shed 2	May '18 - Apr '19	42	0	0	644	210	450	0	26	Ton
All Sources	**May '18 - Apr '19**	**1,220**	**1,449**	**0**	**1,288**	**494**	**750**	**1,288**	**1,426**	**Ton**
Broiler Houses	May '19 - Apr '20	1,339	1,449	0	0	0	112	1,271	1,405	Ton
Stacking Shed 1	May '19 - Apr '20	61	0	0	532	43	550	0	0	Ton
Stacking Shed 2	May '19 - Apr '20	26	0	0	739	361	405	0	0	Ton
All Sources	**May '19 - Apr '20**	**1,426**	**1,449**	**0**	**1,271**	**403**	**1,067**	**1,271**	**1,405**	**Ton**

6.10. Fertilizer Material Annual Summary

Product Analysis	Plan Period	Product Needed May - Aug	Product Needed Sep - Dec	Product Needed Jan - Apr	Total Product Needed	Units
30-0-0	May '16 - Apr '17	1,598	0	4,154	5,752	Gal
30-0-0	May '17 - Apr '18	0	0	2,141	2,141	Gal
30-0-0	May '18 - Apr '19	1,598	0	1,102	2,700	Gal
30-0-0	May '19 - Apr '20	2,768	0	2,271	5,039	Gal

6.11. Plan Nutrient Balance (Manure-spreadable Area)

	N (Lbs)	P_2O_5 (Lbs)	K_2O (Lbs)
Total Manure Nutrients on Hand at Start of Plan[1]	50,580	49,175	42,150
Total Manure Nutrients Collected[2]	208,656	202,860	173,880
Total Manure Nutrients Imported[3]	0	0	0
Total Manure Nutrients Exported[4]	130,536	126,910	108,780
Total Manure Nutrients Gained/Lost in Transfer[5]	0	0	0
Total Manure Nutrients on Hand at End of Plan[6]	50,580	49,175	42,150
Total Manure Nutrients Applied[7]	78,199	76,027	65,166
Available Manure Nutrients Applied (Utilized by plan's crops)[8]	36,416	61,908	53,064
Available Manure Nutrients Applied (Not utilized by plan's crops)[9]	8,294	14,119	12,102
Commercial Fertilizer Nutrients Applied (Utilized by plan's crops)[10]	40,530	0	0
Commercial Fertilizer Nutrients Applied (Not utilized by plan's crops)[11]	6,690	0	0
Available Nutrients Applied (Manure and fertilizer; utilized by plan's crops)[12]	76,946	61,908	53,064
Nutrient Utilization Potential[13]	155,316	54,896	78,677
Nutrient Balance of Spreadable Acres[14*]	-78,370	7,012	-25,613
Average Nutrient Balance per Spreadable Acre per Year[15*]	-102	9	-33

1. Values indicate total manure nutrients present in storage(s) at the beginning of the plan.
2. Values indicate total manure nutrients collected on the farm.
3. Values indicate total manure nutrients imported onto the farm.
4. Values indicate total manure nutrients exported from the farm to an external operation.
5. Values indicate changes in total manure nutrients due to internal transfers between storage units with differing analyses.
6. Values indicate total manure nutrients present in storage(s) at the end of plan.
7. Values indicate total nutrients present in land-applied manure. Losses due to rate, timing and method of application are not included in these values.
8. Values indicate available manure nutrients applied on the farm based on rate, time and method of application. These values are based on the total manure nutrients applied (row 7) after accounting for state-specific nutrient losses due to rate, time and method of application. Nutrients which will not be utilized by crops in the plan (row 9) are excluded from these values.
9. Values indicate manure nutrients applied that will be utilized by crops outside the plan.
10. Values indicate nutrients applied as commercial fertilizers and nitrates contained in irrigation water. Nutrients that will not be utilized by crops in the plan (row 11) are excluded from these values.
11. Values indicate nutrients applied as commercial fertilizer which will be utilized by crops outside the plan.
12. Values are the sum of available manure nutrients applied (row 8) and commercial fertilizer nutrients applied (row 10).
13. Values indicate nutrient utilization potential of crops grown. For N the value generally is based on crop N recommendation for non-legume crops and crop N uptake or other state-imposed limit for N application rates for legumes. P_2O_5 and K_2O values generally are based on fertilizer recommendations or crop removal (whichever is greatest).
14. Values indicate available nutrients applied (row 12) minus crop nutrient utilization potential (row 13). Negative values indicate additional nutrient utilization potential and positive values indicate over-application.
15. Values indicate average per acre nutrient balance. Values are calculated by dividing nutrient balance of spreadable acres (row 14) by the number of spreadable acres in plan and by the length of the plan in years. Negative values indicate additional average per acre nutrient utilization potential and positive values indicate average per acre over-application.

* Non-trivial, positive values for N indicate that the plan was not properly developed. Negative values for N indicate additional nutrient utilization potential which may or may not be intentional. For example, plans that include legume crops often will not utilize the full N utilization potential for legume crops if manure can be applied to non-legume crops that require N for optimum yield. Positive values for P_2O_5 and/or K_2O do not necessarily indicate that the plan was not developed properly. For example, producers may be allowed to apply N-based application rates of manure to fields with low soil test P values or fields with a low potential P-loss risk based on the risk assessment tool used by the state. Negative values for P_2O_5 and K_2O indicate that planned applications to some fields are less than crop removal rates.

Plan Nutrient Balance (Non-manure-spreadable Area)

	N (Lbs)	P_2O_5 (Lbs)	K_2O (Lbs)
Commercial Fertilizer Nutrients Applied[1]	3,017	0	0
Nutrient Utilization Potential[2]	6,493	332	4,482
Nutrient Balance of Non-spreadable Acres[3*]	-3,476	-332	-4,482
Average Nutrient Balance per Non-spreadable Acre per Year[4*]	-58	-5	-74

1. Values indicate nutrients applied as commercial fertilizers and nitrates contained in irrigation water.
2. Values indicate nutrient utilization potential of crops grown based on crop fertilizer recommendations.
3. Values indicate commercial fertilizer nutrients applied (row 1) minus crop nutrient utilization potential (row 2). Negative values indicate additional nutrient utilization potential and positive values indicate over-application.
4. Values indicate average per acre nutrient balance. Values are calculated by dividing nutrient balance of non-spreadable acres (row 3) by number of non-spreadable acres in plan. Negative values indicate additional average per acre nutrient utilization potential and positive values indicate average per acre over-application.

* Non-trivial, positive values for N indicate that the plan was not properly developed. Negative values for N indicate additional nutrient utilization potential which may or may not be intentional. Positive values for P_2O_5 and/or K_2O do not necessarily indicate that the plan was not developed properly. For example, multiple year applications may have been planned during the final plan year(s) and these nutrients will not be utilized by crops in the current plan. Negative values for P_2O_5 and K_2O indicate that applications to some fields may have been delayed to allow the producer to apply the nutrients in accordance with their fertilization schedule.

Section 7. Feed Management

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

Any significant changes that would result in nutrient changes in the manure will require a re-evaluation of this plan (CNMP). Feed rations are formulated and provided by Amick Farms.

Section 8. Other Utilization Options

All excess litter will be exported by L & M Litter Brokers (19,463-AG). A manure broker agreement is included on the following page.

CONTRACT FOR PURCHASE OF WASTE

L+M Lotta Beefers, Broker Permit No. 19463-AG will purchase agricultural waste (manure, litter, compost) from James H. Young JR. Facility, Producer, located in Laurens County and identified by SC DHEC Operating Permit No. _____.

Purchase price will be based upon services rendered and/or agreed to price at date of clean out.

Broker will provide necessary equipment and services to remove waste from the facility. Upon removing the waste, Broker accepts all waste utilization responsibilities ensuring the waste is handled, transported, stored, and/or applied in a manner consistent with SC DHEC Regulations 61-43, thus, relieving the Producer of this responsibility.

The Producer will furnish, to the Broker, waste analysis information obtained no earlier than two (2) months before the date of clean out. Waste will be analyzed for:

A. Nutrients (on a dry weigh basis)
- Total Kjeldahl Nitrogen
- Total Inorganic Nitrogen
- Total Ammonia Nitrogen and Total Nitrate Nitrogen
- Potassium as K_2O
- Calcium Carbonate equivalency (if waste is alkaline stabilized)

B. Constituents (on a dry weight basis)
- Arsenic
- Copper
- Zinc

Calcium Carbonate equivalency and Arsenic analysis are not required if producer gives documentation to show these additives are not present in the waste.

Other Provisions:

Agreed to by:

Broker _____ Date 6-1-16 Producer _____ Date 6/1/16

Section 10. Manure Storage Facility Design and Specifications

10.1 Monthly Volumes Entering Storage System

Month-Year	Manure Source	Amount	Manure Destination
Jun 2016	Broiler Houses	65 Tons	SS1
Sep 2016	Broiler Houses	143 Tons	SS1
Dec 2016	Broiler Houses	178 Tons	SS1
Mar 2017	Broiler Houses	104 Tons	SS1
Mar 2017	Broiler Houses	500 Tons	SS2
May 2017	Broiler Houses	65 Tons	SS1
Aug 2017	Broiler Houses	116 Tons	SS1
Nov 2017	Broiler Houses	160 Tons	SS1
Jan 2018	Broiler Houses	65 Tons	SS1
Apr 2018	Broiler Houses	161 Tons	SS1
Apr 2018	Broiler Houses	506 Tons	SS2
Jun 2018	Broiler Houses	65 Tons	SS1
Sep 2018	Broiler Houses	116 Tons	SS1
Dec 2018	Broiler Houses	160 Tons	SS1
Mar 2019	Broiler Houses	67 Tons	SS1
Mar 2019	Broiler Houses	500 Tons	SS2
May 2019	Broiler Houses	65 Tons	SS1
Aug 2019	Broiler Houses	116 Tons	SS1
Nov 2019	Broiler Houses	160 Tons	SS1
Jan 2020	Broiler Houses	65 Tons	SS1
Mar 2020	Broiler Houses	84 Tons	SS1
Mar 2020	Broiler Houses	500 Tons	SS2
Jun 2016	Broiler Houses	65 Tons	SS1

(1) 65 ton events are crustings
(2) Events occurring in March and April are full cleanouts
(3) All other events are windrow cleanouts.

Two 40' X 200' stacking sheds are planned to hold litter until it can be exported.

10.2 Composter Design

Composting facility volume requirements are included on the following page.

Compost Production and Composter Size

Owner: [redacted] Designed by: [redacted] Date: 6/8/2016
County: [redacted] Checked by: [redacted] Date: [redacted]

Compost Production

Number of Birds per Flock	237,600	
Mortality Rate	5.0	%
Life of Flock	8.5	weeks
Number of Flocks per Year	4.5	
Weight of birds at Maturity	9.0	pounds
Weight of birds lost per day	1,797.0	pounds

Composting Recipe

	Volume Ratio	Weight Ratio	Total	
Dead Birds	1.0	1.0	241	tons
Litter	1.5	1.2	289	tons
Straw	1.0	0.1	24	tons
Total Mix before Composting			553	tons
Weight Reduction during Composting			25	%
Compost Produced per Year			415	tons

Composter Size

Composter Volume per lb of Mortality per Day 2.5 cubic feet

Stage 1

Total Stage 1 Volume Needed	4,492.4	cubic feet	
Individual Bin Height	5	feet	
Individual Bin Length	10	feet	
Individual Bin Width (front)	10	feet	
Individual Bin Volume	500	cubic feet	900 sq.ft
Number of Stage 1 Bins Needed	9	includes [redacted]	bins for extra storage

Stage 2

Width of Secondary Bin [redacted] feet

Building Size

Total Length of Shed-Type Building	90	feet
Total Width of Shed-Type Building	22	feet
Area of Building	1980	square feet

Haybale Composter

Height of Piles	[redacted]	feet
Area Needed for Stage 1	0	square feet
Area Needed for Stage 2	0	square feet
Total Area Needed	0	square feet

Section 11. References

11.1. Publications

Crop Fertilizer Recommendations

"Nutrient Management for South Carolina," Clemson University, EC 476, March 2002
http://soils.clemson.edu/476e.pdf

Manure Nutrient Availability

Chapter 3b, "Poultry Manure Production and Nutrient Content," Clemson University
http://www.clemson.edu/extension/livestock/camm/camm_files/poultry/pch3b_00.pdf

Phosphorus Risk Assessment

"The Phosphorus Index, South Carolina," AWMFH, SC Supplement 2, July 2004
http://efotg.sc.egov.usda.gov/references/public/SC/NEH_651_AWMFH_SC_Sup_2_July_2004.pdf

Practice Standards

South Carolina 590 Standard (Nutrient Management)
http://efotg.sc.egov.usda.gov/references/public/SC/SC_590_Nutrient_Management_December2012.pdf

11.2. Software and Data Sources

MMP Version	MMP 0.3.6.0
MMP Plan File	James Young Jr. MMP.mmp 5/20/2016 7:52:21 AM
MMP Initialization File for South Carolina	11/17/2015
MMP Soils File for South Carolina	1/11/2016
Phosphorus Assessment Tool	2013.09.06
NRCS Conservation Plan(s)	n/a
RUSLE2 Library	Version: 2.5.2.11 Build: Aug 26 2014 Science: 20140728
RUSLE2 Database	James Young Jr. MMP.gdb

Section 12. SC Regulation 61-43: Animal Facility Management Plan Cross-Reference

Animal Facility Management Plan Submission Requirements	Location in CNMP
A. Preliminary Site Approval	5
B. Include following Information for Permitting	
1. A completed application form.	4
2. An Animal Facility Management Plan	
a. Facility name,	Cover Page
address,	Cover Page
telephone number,	Cover Page
county, and	Cover Page
National Pollutant Discharge Elimination System Permit or other permit number (if applicable);	
b. Facility location description and	Cover Page
the zoning restrictions in this area;	
c. Applicant's name,	Cover Page
address, and	Cover Page
telephone number (if different from above);	Cover Page
d. Operator's name;	Cover Page
e. Facility capacity;	
i. Number and type of animals;	4
Ii. Pounds of normal production animal live weight at any one time;	4
iii. Amount of animal manure and other animal by-products generated per year (gallons for liquid animal manure and pounds for dry animal manure);	4
iv. Amount in tons of any scraped or separated solid animal manure and other animal by-products generated per year (if applicable);	NA
v. Description of animal manure and other animal by-products storage and storage capacity of lagoon, treatment system or manure storage pond (if applicable); and	NA
vi. Description of animal manure and other animal by-products treatment (if any).	NA
f. Concentration of constituents in liquid animal manure including but not limited to the constituents given below:	
i. Nutrients.	NA

Animal Facility Management Plan Submission Requirements	Location In CNMP
(a) Nitrate (only needed for aerobic systems).	
(b) Ammonium-Nitrogen	
(c) Total Kjeldahl Nitrogen (TKN)	
(d) Organic-Nitrogen (TKN - Ammonium-Nitrogen)	
(e) P 2 O 5	
(f) K 2 O (potash)	
ii. Constituents.	NA
(a) Arsenic	
(b) Copper	
(c) Zinc	
iii. Name, address, SC lab certification number, and telephone number of the laboratory conducting the analyses	NA
For new animal facilities, manure analysis information does not have to be submitted in review of the application. Analysis of the actual animal manure generated shall be submitted to the Department twelve months after a new animal facility starts operation or prior to the first application of animal manure to a manure utilization area, whichever occurs first.	
g. Concentration of constituents in solid animal manure including but not limited to the following:	
i. Nutrients (on a dry weight basis).	35
(a) Total Kjeldahl Nitrogen (mg/kg).	
(b) Total inorganic nitrogen (mg/kg).	
(c) Total ammonia nitrogen (mg/kg) and Total nitrate , nitrogen (mg/kg).	
(d) P 2 O 5 (mg/kg).	
(e) K 2 O (mg/kg).	
(f) Calcium Carbonate equivalency (if animal manure is alkaline stabilized).	
ii. Constituents (on a dry weight basis).	NA
(a) Arsenic (mg/kg).	
(b) Copper (mg/kg).	
(c) Zinc (mg/kg).	
iii. Name, address, SC lab certification number, and telephone number of the laboratory conducting the analyses.	NA
For new animal facilities, manure analysis information does not have to be submitted in review of the application. Analysis of the actual animal manure generated shall be submitted to the Department twelve months after a new animal facility starts operation or prior to the first application of animal manure to a manure utilization area, whichever occurs first.	
h. Animal manure and other animal by-products handling and application information shall be included as follows:	

Animal Facility Management Plan Submission Requirements	Location in CNMP
i. A crop management plan which includes the time of year of the animal manure application and how it relates to crop type, crop planting, and harvesting schedule (if applicable) for all manure utilization areas;	38
ii. Name, address, and telephone number of the producer(s) that will land apply the animal manure and other animal by-products if different from the permittee;	NA
iii. Type of equipment used to transport and/or spread the animal manure and other animal by-products (if applicable); and	4
iv. For spray application systems, plans and specifications with supporting details and design calculations for the spray application system.	NA
i. Facility and manure utilization area information shall be included (as appropriate):	25
ii. Name and address of landowner and location of manure utilization area(s);	Cover Page
iii. List previous calendar years that animal manure was applied and application amounts, where available;	NA
iv. Facility and manure utilization area location(s) on maps drawn to approximate scale including:	25
(a) Topography (7.5' or equivalent) and drainage characteristics (including ditches);	8 & 25
(b) Adjacent land usage (within 1/4 mile of property line minimum) and location of inhabited dwellings and public places showing property lines and tax map number;	8
(c) All known water supply wells on applicant's property and within 200 feet of the facility's property line or within 200 feet of any manure utilization areas;	8 & 25
(d) Adjacent surface water bodies (including ephemeral and intermittent streams);	8 & 25
(e) Animal manure utilization area boundaries and buffer zones;	25
(f) Right-of-Ways (Utilities, roads, etc.);	8 & 25
(g) Soil types as given by soil tests or soils maps, a description of soil types, and boring locations (if applicable);	8 & 25
(h) Recorded Plats, Surveys, or other acceptable maps that include property boundaries; and	8 & 25
(i) Information showing the 100-year floodplain (as determined by FEMA).	8 & 25

Animal Facility Management Plan Submission Requirements	Location in CNMP
v. For manure utilization areas not owned by the permit applicant, a signed agreement between the permit applicant and the landowner acceptable to the Department detailing the liability for the land application. The agreement shall include, at a minimum, the following:	
(a) Producer's name, farm name and county in which the farm is located;	Cover Page
(b) Landowner's name, address, phone number;	Cover Page
(c) Location (map with road names and county identified) of the land to receive manure application;	25
(d) Field acreage, acreage less setbacks, and crops grown;	38
(e) Name of manure hauler;	4
(f) Name of manure applier;	4
(g) A statement that land is not included in any other management plans and manure or compost from another farm is not being applied on this land; and	N/A
(h) A signed statement, which informs the landowner that he is responsible for spreading and utilizing this manure in accordance with the requirements of the Department and Regulation 61-43.	2
vi. For other manure utilization areas that are included in multiple Animal Facility Management Plans, identify the names of all facilities that include this manure utilization area in their plan.	N/A
3. Groundwater monitoring well details and proposed groundwater monitoring program (if applicable).	N/A
4. The Animal Facility Management Plan shall contain an odor abatement plan for the animal facility, lagoon, treatment system, manure storage pond, and manure utilization areas. For more specific details, see Section 200.150 (Odor Control Requirements).	20
5. A Vector Abatement Plan shall be included for the animal facility, lagoon, treatment system or manure storage pond, and manure utilization areas. For more specific details see Section 200.160 (Vector Control Requirements).	20
6. Dead Animal Disposal Plan. The plan shall include written details for handling and disposal of dead animals. Plans should detail method of disposal, any construction specifications necessary, and management practices. See Section 200.130 (Dead Animal Disposal Requirements) for specific requirements on dead animal disposal.	12 & 23
7. Soil Monitoring Plan. A soil-monitoring plan shall be developed for all manure utilization areas. See Section 200.100 (Manure Utilization Area Requirements) for more detailed information.	N/A

Animal Facility Management Plan Submission Requirements	Location In CNMP
8. Plans and specifications for all other manure treatment or storage structures, such as holding tanks or manure storage sheds.	Separate Document
9. All "A Notice of Intent to Build or Expand an Animal Facility" forms as provided by the Department and a tax map (or equivalent) to scale showing all neighboring property owners and identifying which property has inhabited dwellings. See Section 200.60 (Public Notice Requirements) for more detailed information.	66
10. An Emergency Plan. The emergency plan should at a minimum contain a list of entities or agencies the producer should contact in the event of lagoon, treatment system, or manure storage pond breach, major animal mortality, fire, flood, or other similar type problem. For facilities in the coastal areas of the state, the emergency plan should address actions to be taken by a producer when advance warning is given on any extreme weather condition.	16
11. Adjoining property owners written agreement for reduction of setbacks (if applicable).	67

Section 13. Attachments

Attachment A – Notices of Intent

D H E C
PROMOTE PROTECT PROSPER

AGRICULTURE FACILITY
PUBLIC NOTICE OF INTENT TO APPLY FOR AN AGRICULTURAL PERMIT

An agricultural animal growing operation is proposed by the following:

Permit Applicant: Jim Young

County: Laurens

Location: Near intersection of Lisbon Rd. and Hwy 72

Number of Animal Barns Proposed: 6 Animal type: Broilers

Type of manure treatment/storage proposed: Land apply litter following clean out

This Public Notice of Intent to Construct is to inform you, as an adjoining property owner or a property owner within 1,320 feet of the proposed facility, that an agricultural facility is proposed to be built near your property. The signing of this form only indicates that you are aware of the proposed farm construction. The signing of this form **DOES NOT** waive any legal rights that a property owner has concerning the Department's permitting process in this matter. Nor does signing of this form constitute making a comment to the Department. Also, if the Department's permit decision is appealed, the signing of this form does not mean that the property owner cannot participate in the appeal process. Participation in the appeal process will depend upon your legal standing in the matter.

Please Print (except for signature)

Name: David Coggins

Address: 1094 Lisbon Rd Mountville SC 29370

Phone #: 864-981-5604

Signature: David R Coggins

Date: 5-31-016

Refusal to sign this form will not prohibit the Department from making a permit decision on the proposed facility. If you refuse to sign this form, the permit applicant will complete this form and write "refused to sign" in the signature block. If you have objections to the construction of this facility, you may address specific objections/issues, in writing to: SCDHEC, Industrial, Agricultural & Stormwater Permitting Division, 2600 Bull Street, Columbia, SC 29201. The Department will consider all written comments in making the permit decision. All persons submitting comments will be notified of the permit decision made by the Department. Please note that the Department is not involved in property values, zoning or land use issues as these are local issues, which must be addressed by local governments. Please contact your local county or municipal officials for any concerns on these issues.

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Please Print (except for signature)

Name: Heath Coggins 511-00-00-009

Address: 113 Moreland Ave. Laurens Co SC 29360

Phone #: 864-872-4098

Signature:

Date: 6-1-16

Refusal to sign this form will not prohibit the Department from making a permit decision on the proposed facility. If you refuse to sign this form, the permit applicant will complete this form and write "refused to sign" in the signature block. If you have objections to the construction of this facility, you may address specific objections/issues, in writing to: SCDHEC, Industrial, Agricultural & Stormwater Permitting Division, 2600 Bull Street, Columbia, SC 29201. The Department will consider all written comments in making the permit decision. All persons submitting comments will be notified of the permit decision made by the Department. Please note that the Department is not involved in property values, zoning or land use issues as these are local issues, which must be addressed by local governments. Please contact your local county or municipal officials for any concerns on these issues.

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Dunbar Home Place
3173 Hagerty Dr.
Charleston SC 29414

9590 9402 1598 5362 3173 27

2 Article Number (Transfer from service label)
7013 2630 0000 3668 8564

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) JOHN BASEL C. Date of Delivery 5-23-16

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Adult Signature ☐ Priority Mail Express®
☐ Adult Signature Restricted Delivery ☐ Registered Mail™
☐ Certified Mail® ☐ Registered Mail Restricted Delivery
☐ Certified Mail Restricted Delivery ☐ Return Receipt for Merchandise
☐ Collect on Delivery ☐ Signature Confirmation™
☐ Collect on Delivery Restricted Delivery ☐ Signature Confirmation Restricted Delivery
☐ Restricted Delivery

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Walter Ewell LLC
3173 Hagert Drive
Charleston SC 29414

9590 9402 1598 5362 3173 34

2. Article Number (Transfer from service label)
7013 2630 0000 3668 8649

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

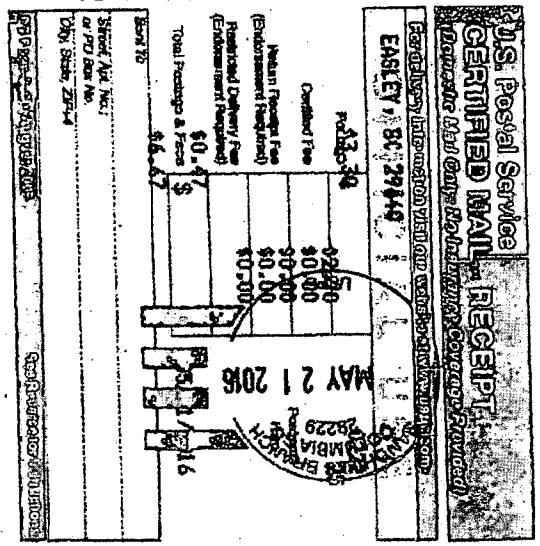
B. Received by (Printed Name) JOHN BASEL C. Date of Delivery 5/23/16

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

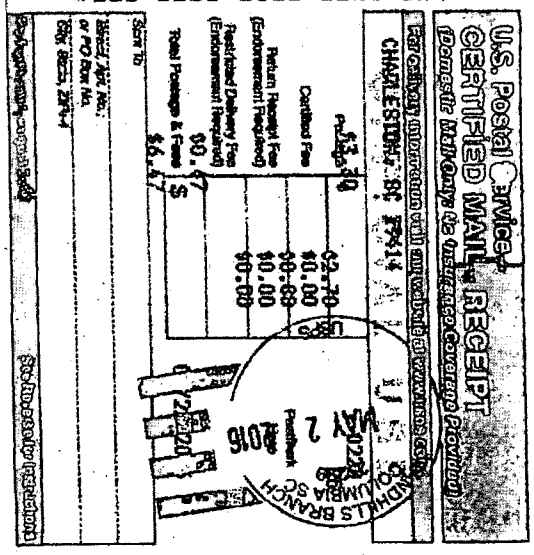
3. Service Type
☐ Adult Signature ☐ Priority Mail Express®
☐ Adult Signature Restricted Delivery ☐ Registered Mail™
☐ Certified Mail® ☐ Registered Mail Restricted Delivery
☐ Certified Mail Restricted Delivery ☐ Return Receipt for Merchandise
☐ Collect on Delivery ☐ Signature Confirmation™
☐ Collect on Delivery Restricted Delivery ☐ Signature Confirmation Restricted Delivery
☐ Restricted Delivery

Domestic Return Receipt

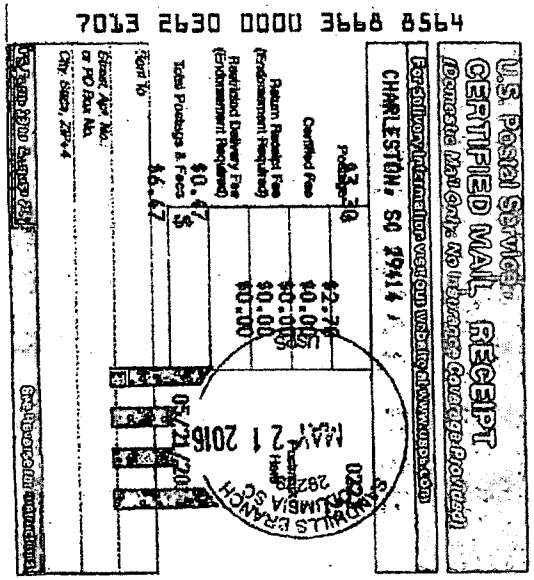
7013 2630 0000 3668 8557



7013 2630 0000 3668 8649



7013 2630 0000 3668 8564



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Please Print (except for signature)

Name: Walter Ewell LLC 511-00-00-007

Address: 3173 Hagerty Dr. Charleston, SC 29414

Phone #:

Signature:

Date:

Refusal to sign this form will not prohibit the Department from making a permit decision on the proposed facility. If you refuse to sign this form, the permit applicant will complete this form and write "refused to sign" in the signature block. If you have objections to the construction of this facility, you may address specific objections/issues, in writing to: SCDHEC, Industrial, Agricultural & Stormwater Permitting Division, 2600 Bull Street, Columbia, SC 29201. The Department will consider all written comments in making the permit decision. All persons submitting comments will be notified of the permit decision made by the Department. Please note that the Department is not involved in property values, zoning or land use issues as these are local issues, which must be addressed by local governments. Please contact your local county or municipal officials for any concerns on these issues.

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County: Laurens

Location: Near intersection of Lisbon Rd. and Hwy 72

Number of Animal Barns Proposed: 6 Animal type: Broilers

Type of manure treatment/storage proposed: Land apply litter following clean out

This Public Notice of Intent to Construct is to inform you, as an adjoining property owner or a property owner within 1,320 feet of the proposed facility, that an agricultural facility is proposed to be built near your property. The signing of this form only indicates that you are aware of the proposed farm construction. The signing of this form **DOES NOT** waive any legal rights that a property owner has concerning the Department's permitting process in this matter. Nor does signing of this form constitute making a comment to the Department. Also, if the Department's permit decision is appealed, the signing of this form does not mean that the property owner cannot participate in the appeal process. Participation in the appeal process will depend upon your legal standing in the matter.

Please Print (except for signature)

Name: Dunlap Home Place 511-00-00-005

Address: 3173 Hagerty Dr. Charleston, SC 29414

Phone #:

Signature:

Date:

Refusal to sign this form will not prohibit the Department from making a permit decision on the proposed facility. If you refuse to sign this form, the permit applicant will complete this form and write "refused to sign" in the signature block. If you have objections to the construction of this facility, you may address specific objections/issues, in writing to: SCDHEC, Industrial, Agricultural & Stormwater Permitting Division, 2600 Bull Street, Columbia, SC 29201. The Department will consider all written comments in making the permit decision. All persons submitting comments will be notified of the permit decision made by the Department. Please note that the Department is not involved in property values, zoning or land use issues as these are local issues, which must be addressed by local governments. Please contact your local county or municipal officials for any concerns on these issues.

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Dunbar Home Place
3173 Hagerty Dr.
Charleston SC 29414

9590 9402 1598 5362 3173 27

2. Article Number (Transfer from service label)

7013 2630 0000 3668 8564

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) JOHN DASEL C. Date of Delivery 5-23-16

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

☐ Adult Signature ☐ Priority Mail Express®
☐ Adult Signature Restricted Delivery ☐ Registered Mail™
☐ Certified Mail® ☐ Registered Mail Restricted Delivery
☐ Certified Mail Restricted Delivery ☐ Return Receipt for Merchandise
☐ Collect on Delivery ☐ Signature Confirmation™
☐ Collect on Delivery Restricted Delivery ☐ Signature Confirmation Restricted Delivery
☐ Insured Mail ☐ Restricted Delivery

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Walter Ewell LLC
3173 Hagert Drive
Charleston SC 29414

9590 9402 1598 5362 3173 34

2. Article Number (Transfer from service label)

7013 2630 0000 3668 8649

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) JOHN DASEL C. Date of Delivery 5/23/16

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

☐ Adult Signature ☐ Priority Mail Express®
☐ Adult Signature Restricted Delivery ☐ Registered Mail™
☐ Certified Mail® ☐ Registered Mail Restricted Delivery
☐ Certified Mail Restricted Delivery ☐ Return Receipt for Merchandise
☐ Collect on Delivery ☐ Signature Confirmation™
☐ Collect on Delivery Restricted Delivery ☐ Signature Confirmation Restricted Delivery

7013 2630 0000 3668 8557

U.S. Postal Service
CERTIFIED MAIL® RECEIPT
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For delivery information, visit our website at www.usps.com

EASLEY, SC 29640

Certified Fee $3.30
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.47

Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4

MAY 21 2016

7013 2630 0000 3668 8649

U.S. Postal Service
CERTIFIED MAIL® RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information, visit our website at www.usps.com

CHARLESTON, SC 29414

Certified Fee $3.30
Return Receipt Fee (Endorsement Required) $2.70
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.47

Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4

MAY 21 2016

7013 2630 0000 3668 8564

U.S. Postal Service
CERTIFIED MAIL® RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information, visit our website at www.usps.com

CHARLESTON, SC 29414

Certified Fee $3.30
Return Receipt Fee (Endorsement Required) $2.70
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.47

Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4

MAY 21 2016

DHEC_003338

1646

D H E C

PROMOTE PROTECT PROSPER

AGRICULTURE FACILITY
PUBLIC NOTICE OF INTENT TO APPLY FOR AN AGRICULTURAL PERMIT

An agricultural animal growing operation is proposed by the following:

Permit Applicant: Jim Young

County: Laurens

Location: Near intersection of Lisbon Rd. and Hwy 72

Number of Animal Barns Proposed: 6 Animal type: Broilers

Type of manure treatment/storage proposed: Land apply litter following clean out

This Public Notice of Intent to Construct is to inform you, as an adjoining property owner or a property owner within 1,320 feet of the proposed facility, that an agricultural facility is proposed to be built near your property. The signing of this form only indicates that you are aware of the proposed farm construction. The signing of this form **DOES NOT** waive any legal rights that a property owner has concerning the Department's permitting process in this matter. Nor does signing of this form constitute making a comment to the Department. Also, if the Department's permit decision is appealed, the signing of this form does not mean that the property owner cannot participate in the appeal process. Participation in the appeal process will depend upon your legal standing in the matter.

Please Print (except for signature)

Name: Eugene Stewart JR 511-00-00-006

Address: 106 Meadow Wood Ct. Easly, SC 29640

Phone #:

Signature:

Date:

Refusal to sign this form will not prohibit the Department from making a permit decision on the proposed facility. If you refuse to sign this form, the permit applicant will complete this form and write "refused to sign" in the signature block. If you have objections to the construction of this facility, you may address specific objections/issues, in writing to: SCDHEC, Industrial, Agricultural & Stormwater Permitting Division, 2600 Bull Street, Columbia, SC 29201. The Department will consider all written comments in making the permit decision. All persons submitting comments will be notified of the permit decision made by the Department. Please note that the Department is not involved in property values, zoning or land use issues as these are local issues, which must be addressed by local governments. Please contact your local county or municipal officials for any concerns on these issues.

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Tracking Number: 70132630000036688557

Your item was undeliverable as addressed at 1:54 pm on June 7, 2016 in EASLEY, SC 29642. It is being returned if appropriate information is available.

Product & Tracking Information

Postal Product:
First-Class Mail®

Features:
Certified Mail™ Return Receipt

See tracking for related item: 9590940215985362317310

DATE & TIME	STATUS OF ITEM	LOCATION
June 7, 2016 , 1:54 pm	Undeliverable as Addressed	EASLEY, SC 29642
[illegible]	[illegible]	[illegible]
June 1, 2016 , 3:42 pm	Available for Pickup	EASLEY, SC 29640
May 23, 2016 , 3:11 pm	Notice Left (No Authorized Recipient Available)	EASLEY, SC 29642
May 23, 2016 , 8:37 am	Out for Delivery	EASLEY, SC 29640
May 23, 2016 , 8:27 am	Sorting Complete	EASLEY, SC 29640
May 23, 2016 , 8:21 am	Arrived at Unit	EASLEY, SC 29640
May 23, 2016 , 1:16 am	Departed USPS Facility	GREENVILLE, SC 29607
May 22, 2016 , 11:12 am	Arrived at USPS Facility	GREENVILLE, SC 29607
May 21, 2016 , 9:28 pm	Arrived at USPS Facility	COLUMBIA, SC 29201
May 21, 2016 , 8:58 pm	Departed Post Office	COLUMBIA, SC 29229
May 21, 2016 , 11:39 am	Acceptance	COLUMBIA, SC 29229

Available Actions

Text Updates

Email Updates

Track Another Package

Tracking (or receipt) number

Track It

Manage Incoming Packages

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Tracking Number: 70132630000035684656

In-Transit

On Time
Expected Delivery Day: Saturday, June 4, 2016

Product & Tracking Information

Postal Product:
First-Class Mail®

Features:
Certified Mail™ | Return Receipt

See tracking for related item: [illegible]

DATE & TIME	STATUS OF ITEM	LOCATION
June 4, 2016, 1:58 pm	Notice Left (No Authorized Recipient Available)	EASLEY, SC 29642
[illegible]		
June 4, 2016, 9:22 am	Out for Delivery	EASLEY, SC 29640
June 4, 2016, 8:12 am	Sorting Complete	EASLEY, SC 29640
June 4, 2016, 6:26 am	Arrived at Unit	EASLEY, SC 29640
June 4, 2016, 2:01 am	Departed USPS Facility	GREENVILLE, SC 29607
June 3, 2016, 10:53 am	Arrived at USPS Facility	GREENVILLE, SC 29607
June 3, 2016, 12:19 am	Departed USPS Facility	COLUMBIA, SC 29201
June 2, 2016, 7:04 pm	Arrived at USPS Facility	COLUMBIA, SC 29201
June 2, 2016, 4:21 pm	Acceptance	COLUMBIA, SC 29229

Available Actions

Schedule Redelivery
Text Updates
Email Updates

Track Another Package

Tracking (or receipt) number

Track It

Manage Incoming Packages

Track all your packages from a dashboard.
No tracking numbers necessary.

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1649

SANDHILL
1800 CLEMSON RD
COLUMBIA
SC
29229-9998
4518120222

05/21/2016 (800)275-8777 11:44 AM

Product Description	Sale Qty	Final Price
First-Class Mail Letter (Domestic) (CHARLESTON, SC 29414) (Weight:0 Lb 0.50 Oz) (Expected Delivery Day) (Monday 05/23/2016)	1	$0.47
Certified (USPS Certified Mail #) (70132630000036688649)	1	$3.30
Return Receipt (USPS Return Receipt #) (9590940215985362317334)	1	$2.70
First-Class Mail Letter (Domestic) (CHARLESTON, SC 29414) (Weight:0 Lb 0.50 Oz) (Expected Delivery Day) (Monday 05/23/2016)	1	$0.47
Certified (USPS Certified Mail #) (70132630000036688564)	1	$3.30
Return Receipt (USPS Return Receipt #) (9590940215985362317327)	1	$2.70
First-Class Mail Letter (Domestic) (EASLEY, SC 29640) (Weight:0 Lb 0.50 Oz) (Expected Delivery Day) (Monday 05/23/2016)	1	$0.47
Certified (USPS Certified Mail #) (70132630000036688557)	1	$3.30
Return Receipt (USPS Return Receipt #) (9590940215985362317310)	1	$2.70
Total		$19.41
Debit Card Remit'd (Card Name:Debit Card) (Account #:XXXXXXXXXXXX6411) (Approval #:908913) (Transaction #:728) (Receipt #:001778) (Debit Card Purchase:$19.41) (Cash Back:$0.00)		$19.41

1650

SANDHILLS
1805 CLEMSON RD
COLUMBIA
SC
29229-9998
4518120222
06/02/2016 (800)275-8777 4:23 PM

Product Description	Sale Qty	Final Price
First-Class Mail Letter (Domestic) (EASLEY, SC 29640) (Weight:0 Lb 0.50 Oz) (Expected Delivery Day) (Saturday 06/04/2016)	1	$0.47
Certified (USPS Certified Mail #) (70132630000366846658)	1	$3.30
Return Receipt (USPS Return Receipt #) (9590952100150257915025)	1	$2.70
Total		$6.47
Cash		$10.00
Change		($3.53)

Text your tracking number to 28777 (2USPS) to get the latest status. Standard Message and Data rates may apply. You may also visit USPS.com USPS Tracking or call 1-800-222-1811.

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(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com
EASLEY, SC 29640 USPS 0222 08

Postage	$3.30
Certified Fee	$2.70
Return Receipt Fee (Endorsement Required)	$0.00
Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$0.00
	$6.47

Postmark Here
06/02/2016

Sent To: Eugene Stewart Jr.
Street, Apt. No., or PO Box No.: 106 Meadow Wood Ct.
City, State, ZIP+4: Easley SC 29640

PS Form 3800, August 2006 See Reverse for Instructions

DHEC_003343

1651

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Tracking Number: 70132630000036884658

Product & Tracking Information

Available Actions

Postal Product:
First-Class Mail®

Features:
Certified Mail™ Return Receipt

See tracking for related item: 9590962106150257915025

DATE & TIME	STATUS OF ITEM	LOCATION
July 8, 2016 , 4:34 pm	Delivered	BLYTHEWOOD, SC 29016
[illegible]		
July 8, 2016 , 9:57 am	Notice Left (No Authorized Recipient Available)	BLYTHEWOOD, SC 29016
July 8, 2016 , 8:17 am	Arrived at Unit	BLYTHEWOOD, SC 29016
July 7, 2016 , 11:05 pm	Departed USPS Facility	COLUMBIA, SC 29201
July 7, 2016 , 9:42 am	Arrived at USPS Facility	COLUMBIA, SC 29201
July 6, 2016 , 7:49 am	Departed USPS Facility	GREENVILLE, SC 29607
June 27, 2016 , 5:58 pm	Unclaimed/Max Hold Time Expired	EASLEY, SC 29640
June 4, 2016 , 1:58 pm	Notice Left (No Authorized Recipient Available)	EASLEY, SC 29642
June 4, 2016 , 9:22 am	Out for Delivery	EASLEY, SC 29640
June 4, 2016 , 9:12 am	Sorting Complete	EASLEY, SC 29640
June 4, 2016 , 8:26 am	Arrived at Unit	EASLEY, SC 29640
June 3, 2016 , 10:53 am	Arrived at USPS Facility	GREENVILLE, SC 29607
June 3, 2016 , 12:19 am	Departed USPS Facility	COLUMBIA, SC 29201
June 2, 2016 , 7:04 pm	Arrived at USPS Facility	COLUMBIA, SC 29201
June 2, 2016 , 4:21 pm	Acceptance	COLUMBIA, SC 29229

Track Another Package

Tracking (or receipt) number

Track It

Manage Incoming Packages

Track all your packages from a dashboard.
No tracking numbers necessary.

Attachment B – Setback Waivers

Date: May 15, 2016

I, Heath Coggins, as owner of tax map tract number 511-00-00-009 waive the

- [ ] 200 ft. property line setback
- [x] 400 ft. property line setback
- [ ] 1,000 ft. permanent resident setback

for the construction of an agricultural facility owned by James Young (producer) located at Lisbon Road east of Heath Coggins Property.

Property Owner Signature: _____

Heath Coggins
(printed name)

NOTE:

1. Sometimes more than one setback waiver option will need to be checked.
2. 200 ft. property line setback is for facilities with less than 500,000 lbs. of animal weight.
3. 400 ft. property line setback is for facilities with more than 500,000 lbs. of animal weight.

Attachment C – Spreading Agreements

Permission for Land Application of Agricultural Waste

When a producer will be responsible for the spreading of manure on land not owned by the producer, this form, or one similar, should be completed by the owner of land that is included in the producer's waste management plan as a designated waste application site. This form, when completed, should be included in the Waste Management Plan that is submitted to SC DHEC as part of an application for a permit to build an agricultural facility.

I, M. Calvin Young, will allow
(Land Owner)

James M. Young, Jr. to apply animal waste to
(Producer/Applier)

Tract(s) # 663-00-00-008 and Field(s) # _____

In Laurens County, South Carolina.

Signature of Landowner: M. Calvin Young

Date: 4/25/16

Landowner Phone #: 864-833-5098

1656

Permission for Land Application of Agricultural Waste

When a producer will be responsible for the spreading of manure on land not owned by the producer, this form, or one similar, should be completed by the owner of land that is included in the producer's waste management plan as a designated waste application site. This form, when completed, should be included in the Waste Management Plan that is submitted to SC DHEC as part of an application for a permit to build an agricultural facility.

I, James M. Young, will allow

(Land Owner)

James M. Young Jr. to apply animal waste to

(Producer/Applier)

Tract(s) # 679-00-00-014 and Field(s) # _____

in Laurens County, South Carolina.

Signature of Landowner: James M Young

Date: 25 April 2016

Landowner Phone #: 864-923-3073

1657

Permission for Land Application of Agricultural Waste

When a producer will be responsible for the spreading of manure on land not owned by the producer, this form, or one similar, should be completed by the owner of land that is included in the producer's waste management plan as a designated waste application site. This form, when completed, should be included in the Waste Management Plan that is submitted to SC DHEC as part of an application for a permit to build an agricultural facility.

I, M. Calvin Young, will allow
(Land Owner)

James M. Young Jr. to apply animal waste to
(Producer/Applier)

Tract(s) # 679-00600-010 and Field(s) # _____

in Laurens County, South Carolina.

Signature of Landowner: M. Calvin Young

Date: 4/25/16

Landowner Phone #: 864-833-5098

DHEC_003350

1658

Permission for Land Application of Agricultural Waste

When a producer will be responsible for the spreading of manure on land not owned by the producer, this form, or one similar, should be completed by the owner of land that is included in the producer's waste management plan as a designated waste application site. This form, when completed, should be included in the Waste Management Plan that is submitted to SC DHEC as part of an application for a permit to build an agricultural facility.

I, M. Calvin Young, will allow

(Land Owner)

James M. Young Jr. to apply animal waste to

(Producer/Applier)

Tract(s) # 663-00-00-010 and Field(s) # _____

in Laurens County, South Carolina.

Signature of Landowner: M. Calvin Young

Date: 4/25/16

Landowner Phone #: 864-537-5098

1659

Permission for Land Application of Agricultural Waste

When a producer will be responsible for the spreading of manure on land not owned by the producer, this form, or one similar, should be completed by the owner of land that is included in the producer's waste management plan as a designated waste application site. This form, when completed, should be included in the Waste Management Plan that is submitted to SC DHEC as part of an application for a permit to build an agricultural facility.

I, M. Calvin Kemp, will allow

(Land Owner)

James M. Kemp Jr. to apply animal waste to

(Producer/Applier)

Tract(s) # 663-00-00-009 and Field(s) # _____

in Laurens County, South Carolina.

Signature of Landowner: M. Calvin Kemp

Date: 4/25/16

Landowner Phone #: 864-833-5098

1660

Coggins land purchase

Mary Basel

Fri 10/21/2016 8:16 AM

To: Chaplin, Bill <CHAPLIWP@dhec.sc.gov>; Martin, Bradley <MARTINBW@dhec.sc.gov>;

Cc: Margaret Sparrow <margaretsparrow6372@gmail.com>; Charles S. Blackmon <charlessblackmon@bellsouth.net>; Sandra McNair <dragonfly@backroads.net>; Barbara Zegen <bobbiwolfzegen@emeraldis.com>; Norma Stewart <T-Mobilenormas106@hotmail.com>;

I saw where David Coggins closed on the purchase of the Lisbon Road property. Has the poultry permit already been approved, or is he confident that DHEC will continue to provide 100% support for his permit request?

Wouldn't it send shock waves through the poultry operators if the permits were denied or delayed until an environmental impact study was completed?

Is there anything DHEC can do to keep Coggins from clear cutting his property (like Alexander/Green have done)?

Please consider the following requests:
1. Maintain a tree buffer along Lisbon Road.
2. Maintain and increase the tree buffer to protect Barbara Zegen's documented severe allergy risks.
3. Honor the 1000 foot setback from our DHEC approved house site (since Coggins has purchased the property to the railroad, this should not be that big of an issue).

Please include the Mountville residents when upholding the DHEC mission statement "to improve the quality of life for ALL South Carolinians by protecting the health of the public and environment."

Sent from my iPhone

dhec
Healthy People. Healthy Communities.

Re: Response to questions and comments provided at public meetings
Proposed Facility Owner: David Coggins, Patricia Green, Mike Alexander, Heath Coggins, & Jim Young
County: Laurens

Dear Concerned Citizen:

Thank you for attending the public meetings on Thursday, September 15, 2016 and Tuesday, October 11, 2016. The Agricultural permitting section received the questions during the comment period of the public meeting. We have responded to the questions below:

1. Can we suspend permits for 12 months so an environmental impact study can be done? **Response: The purpose of Regulation 61-43 (R.61-43) is described in Part 200.10, (Attachment A in Appendix). Based on the power granted by this regulation, the Department has promulgated standards that must be met by the applicant and its facility and criteria the Department is to consider in its decision making process and in compliance reviews of the operation of the facility, if it is permitted. The Department's Agricultural permitting section is responsible for reviewing applications based upon this regulation. The setbacks and requirements in R.61-43 are designed to meet the purpose as described in Part 200.10. Part 200 does not provide an allowance for a delay in permitting of a facility so a community can perform an environmental impact study. The submitted Comprehensive Nutrient Management Plan is required to state how the facility will meet all of the environmental requirements as set forth in R.61-43 to minimize environmental impact.**

2. Why isn't this considered a CAFO? **Response: According to state law, an animal feeding operation (AFO) can only be designated as a CAFO if the Department, after considering other factors, inspects the AFO and determines the AFO is discharging a regulated pollutant or pollutants that is determined to be a significant contributor to downstream or adjacent waters. To prevent the potential of pollution associated with CAFO facilities, R.61-43 Part 200, which governs the operation of all animal facilities other than swine, specifically requires that all facilities governed by it must not discharge pollutants into waters of the State. The regulations are cited as (Attachment B in Appendix)**

The full text of R.61-9 and R.61-43 can be viewed on the Department's website by using the following internet addresses: http://www.scdhec.gov/Agency/docs/water-regs/r61-9.pdf; and http://www.scdhec.gov/Agency/docs/water-regs/r61-43.pdf.

3. What happens when violations are discovered? **Response: If a violation is discovered during a complaint investigation or a routine operation and maintenance inspection, the permit holder will be notified in writing of the facts and circumstances constituting the violation of R.61-43. The violation notification generally includes a timeframe for corrective actions and a date for the Department to re-inspect the facility. If corrections have not been made by the date of the re-inspection or they have not been satisfactorily performed, then a determination will be made on whether an enforcement action is warranted.**

4. What happens if the farmer is sent to enforcement? **Response: The enforcement staff reviews the referral package and determines the severity of the violation(s) and adequacy of the responsible party's response to earlier efforts to come into compliance. Depending on these determinations, an enforcement conference may be scheduled at which the responsible party is given the chance to explain their efforts to come into compliance and have their statements considered as part of deciding if any further corrective actions are needed and/or if any penalties are warranted. After the conference and review of any documents or information provided during the enforcement conference, the Department will issue an enforcement document listing the Department's findings of fact and conclusions of law, corrective action(s) and timeframe(s), if needed, and civil penalties, if applicable to the responsible party.**

5. Why are the farmers given so many chances? **Response: As stated above in the responses to questions numbers 3 & 4, the Department has a process for the investigation of complaints and enforcement of violations of R.61-43, when applicable.**

6. How is Mr. Alexander getting to build more if he is out of compliance? **Response: Currently Mr. Alexander is within compliance according to the Department's records. The Department is mandated under R.61-43 Part 200.70.F, to review each application for compliance with the criteria set forth in the regulation and to, on a case-by-case basis, determine whether to require additional separation distances, based on environmental factors set forth in the regulation. Specifically, Part 200.70.F is cited as (Attachment C in the Appendix)**

7. Mike Alexander has already clear cut the land? **Response: R.61-43 does not include any requirements for the land owner about how to manage the timber that may be on the property. However, the Agricultural permitting staff does have the authority to regulate vegetation that is part of vegetative buffer strips or filtration systems, if such systems are determined to be a condition of the issuance of the permit.**

8. There is no "cumulative effect" part in the Regulation? **Response: R.61-43 Part 200 does not contain any part that requires separation distances between facilities.**

9. Shouldn't we consider health issues more than we do? **Response: The setback requirements in R.61-43 Part 200 take into account to protect the environment and the health and welfare of the citizens of "The State" from pollutants generated by this process. The Agricultural permitting staff made medical evaluations available before and at each public meeting for anyone who wanted to have their health situation evaluated by the Department's medical staff.**

10. Who does DHEC answer to? **Response: The Department answers to the DHEC Board, whose members are appointed by the Governor.**

11. Public Notice process needs to be updated? **Response: The Program continuously reviews the public notice process to ensure the needs of the citizens are met.**

12. Can we extend the comment period due to the hurricane? **Response: The Department has agreed to extend the public comment period until November 1, 2016, for all five (5) proposed facilities the Department had meetings on in September 15 and on October 11.**

Sincerely,

Brad Martin William Chaplin

William Chaplin and Brad Martin
Agriculture Permitting Section
Bureau of Water
SCDHEC
803-898-3532 and 803-898-1745
chapliwp@dhec.sc.gov and martinbw@dhec.sc.gov

cc: file

Appendix

A. ***Part 200.10:*** *1. To establish standards for the growing or confining of animals, processing of animal manure and other animal by-products, and land application of animal manure and other animal by-products in such a manner as to protect the environment, and the health and welfare of citizens of The State from pollutants generated by this process.*
2. To establish standards, which consist of general requirements, constituent limits, management practices, and operational standards, for the utilization of animal manure and other animal by-products generated at animal facilities. Standards included in this part are for animal manure and other animal by-products applied to the land.
3. To establish standards for the frequency of monitoring and record keeping requirements for producers who operate animal facilities.
4. To establish standards for the proper operation and maintenance of animal facilities.
5. To establish criteria for animal facilities and manure utilization areas location as they relate to protection of the environment and public health. The location of animal facilities and manure utilization areas as they relate to zoning in an area is not covered in this regulation. Local county or municipal governments may have zoning requirements and these regulations neither interfere with nor restrict such zoning requirements. Permit applicants should contact local municipal and county authorities to determine any local requirements that may be applicable.

B. *Regulation 61-9 (R.61-9), Water Pollution Control Permits; Section 122.23 Concentrated animal feeding operations:*

(c) How may an AFO be designated as a CAFO? The appropriate authority (i.e., the Department or Regional Administrator, or both, as specified in paragraph (c)(1) of this section) may designate any AFO as a CAFO upon determining that it is a significant contributor of pollutants to waters of the State.

(1) Who may designate? In South Carolina, CAFO designations may be made by the Department. The Regional Administrator may also designate CAFO in South Carolina, but only where

the Regional Administrator has determined that one or more pollutants in the AFO's discharge contributes to an impairment in a downstream or adjacent state or Indian country water that is impaired for that pollutant.

(2) In making this designation, the Department or the Regional Administrator shall consider the following factors:

(i) The size of the AFO and the amount of wastes reaching waters of the State;

(ii) The location of the AFO relative to waters of the State;

(iii) The means of conveyance of animal wastes and process wastewaters into waters of the State;

(iv) The slope, vegetation, rainfall, and other factors affecting the likelihood or frequency of discharge of animal wastes, manure, and process waste waters into waters of the State; and

(v) Other relevant factors.

(3) No AFO shall be designated under this paragraph unless the Department or the Regional Administrator has conducted an on-site inspection of the operation and determined that the operation should and could be regulated under the permit program. In addition, no AFO with numbers of animals below those established in paragraph (b)(6) of this section may be designated as a CAFO unless:

(i) Pollutants are discharged into waters of the State through a manmade ditch, flushing system, or other similar manmade device or

(ii) Pollutants are discharged directly into waters of the State which originate outside of the facility and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation; and

R.61-43 Part 200.20.B Permits and Compliance Period:

B. Permits issued under this regulation are no-discharge permits.

C. ***Part 200.70.F:*** *The setback limits given in this part are minimum siting requirements (with exception to those that are not labeled as minimum requirements, which are absolutes). On a case-by-case basis the Department may require additional separation distances applicable to animal facilities, lagoons, treatment systems, manure storage ponds, and manure utilization areas. The Department shall evaluate the proposed site including, but not limited to, the following factors when determining if additional distances are necessary:*

1. Proximity to 100-year floodplain;
2. Geography and soil types on the site;
3. Location in a watershed;
4. Classification or impairment of adjacent waters;
5. Proximity to a State Designated Focus Area; Outstanding Resource Water; Heritage Corridor; Historic Preservation District; State Approved Source Water Protection Area; state or national park or forest; state or federal research area; and privately-owned wildlife refuge, park, or trust property;
6. Proximity to other known point source discharges and potential nonpoint sources;
7. Slope of the land;
8. Animal manure application method and aerosols;
9. Runoff prevention;
10. Adjacent groundwater usage;
11. Down-wind receptors; and
12. Aquifer vulnerability.

dhec
Healthy People. Healthy Communities.

Agricultural Permitting
Review Checklist Summary
Cover Page

Review Start Date 7-6-16 Review Completed Date 12-9-16

Facility Name David Coggins Broilers NDOO 89338

Applicant's Name David Coggins Phone Number 864-981-5604

Type of Facility Poultry Broilers (6bmy) Integrator Amick Farms

County Laurens EQC Regional Rep. Chrissy Matthews

Plan Preparer Chris Mosley, PE, AWT

Public Notice Date (Issue Date) Dec 14, 2016
deadlines; Wed = Mon 5pm Sat = Wed 5pm.

Newspaper for Public Notice Laurens County Advertiser - pub Wed ; Sat.

Effective Date Dec 29, 2016

Permit Number 19,886-AG

Plan Reviewed by (print) William Chaplin

Web PN: App Rec'd 7-21-16 BM Permitting Decision 12-12-16 wpc

Dams and Agricultural Permitting Section
Outreach, Stormwater, Agricultural and Dams Permitting Division
Bureau of Water

DHEC 2518 (8/2016)

8-17-16 Medical eval delivered to Dr Bell. clock stopped.

DHEC_000899

1666

1667

Facility Name: David Coggins Broilers **Permit No.:** ND00 89338

Task Complete	Review Checklist Summary (Animal)
	ADMINISTRATIVE REVIEW:
✓	Verify the application form is complete.
✓	Enter the application into EFIS.
✓	Check processed and sent to Finance. ***How much was the check made out for?*** $ 240.00 ***Check #:*** 286
✓	Create a facility file folder.
✓	Check Preliminary File for any previously received correspondence.
✓	Comments reviewed and counted. ***Number of Comments:*** > 50
✓	Determine if a public meeting must be held. (YES) or NO Schedule the public meeting, if required. ***Date & Time of Meeting:*** 9-15-16 5:30p.m. ***Location:*** Mountville Fire Dept
	Send a letter to the person(s) submitting health concerns requesting that they submit a physician's statement for review. Letter sent to Barbara Zeger
✓	Send a copy of the application, facility map and cover memo to Bureau of Air Quality. ***Date Sent:*** 7-14-16
✓	Set up Public Notice of Application Received. ***Date went on notice:*** 7-29-16 ***Date goes off notice:*** 8-28-16
✓	Send invitation for the Public Meeting to all persons who submitted a written comment or asked to be notified. ***Date Sent:*** Sept 1, 2016
✓	Send a copy of the application, animal facility management plan and cover memo to BEHS in Groundwater for review and recommendations. ***Date Sent:*** 7-14-16
✓	Send a copy of the application and Animal Facility Management Plan to the District office. ***Date Sent:*** 7-12-16
✓	Verify that a preliminary site inspection was performed on the proposed site submitted in this applica ***PSI Date:*** April 13, 2016

WATER RESOURCES REVIEW:

For this review:

- ***"proposed animal facility" refers to the houses, stacking shed, and/or composter.***
- ***"site" refers to the "proposed animal facility", burial locations, and manure utilization areas.***

Enter the proposed animal facility, burial locations, and manure utilization areas into the Arcview database.

Barn Length: Feet: 600 = Meters: 182.88
Barn Width: Feet: 45 = Meters: 13.716
Barn Spacing: Feet: 60 = Meters: 18.288

Fan Location (Blowing towards): North East

Lat: 81° 57' 35.845 W ↑ 34.394471
Long: 34° 23' 40.095 N ↓ -81.959958

Public Notices Signs Posted by Chrissy Mathews on Date: 7-29-16

Pull the permitted point source discharge (NPDES) overlay and determine where the nearest upstream and downstream locations of any discharge are located and the distance from each station to the proposed site.

Point Source Discharges:

Upstream - Specialty Vermiculite / Hudgens Mine - SCG730030-1BA, located NNW, ~~4.76~~ 4.23 miles by land.

Downstream - Newberry Water Treatment Plant - SCG646047, Located SE ~~19.68~~ 19.69 miles by land.

Additional requirements or setbacks? As this facility is classified as a no discharge facility, no additional setbacks are required.

Pull the water quality monitoring stations overlay and determine where the nearest upstream and downstream monitoring stations are located and the distance from each station to the proposed site.

Water Quality Monitoring Stations:

Upstream - none

Downstream - S-305 - Little River @ SC 34, Located SE, ~~17.88~~ 17.00 miles by land.

Pull the overlay for the drinking water intakes (Surface Water Intakes) and determine if any intakes are located downstream of the proposed site?

(YES) or NO

If yes, list the intakes, locations, and distance downstream:

City of Newberry - System 3610001, Well - 5361011, located SE, ~~19.46~~ 19.47 miles by land.

Is the proposed facility a no-discharge facility? **(YES) or NO**

Additional requirements or setbacks? No additional setbacks are required.

Pull the State Approved Source Water Protection Area overlay and review the proposed site in reference to these areas.

Is the facility located in a State Approved Source Water Protection Area?

YES or (NO)

Are any of the manure utilization areas located in a State Approved Source Water Protection Area?

YES NO (N/A Manure Broker)

If the proposed site is in the vicinity of the State Approved Source Water Protection Area, then note the separation distance? The nearest downstream SWPA is located SE, ~~7.55~~ 7.62 miles by land.

Additional requirements or setbacks? no additional setbacks are required.

Pull the ground water public supply well (Source Water Protection → Public Water Supply Wells) overlay and determine if any public water supply wells are located adjacent to the proposed site? **YES** or **NO**

If yes, what is the name of the water supply well and distance between the site and the public water supply well? The nearest public water supply well is, Michelin Laurens Proving Grounds System 3030005, well G 30178, located West, ~~3.75~~ 3.76 miles by land.

Additional requirements or setbacks? As per R61-58, the minimum separation distance should be at least 100 feet, therefore no additional setbacks are required.

Pull the 303(d) (2014 303D List) impaired water body list overlay and list any impairment and the distance to the impairment from the proposed site.

Proposed Facility:
The Nearest downstream 303 D site is S-305, Little River @ SC34, located SE, ~~16.98~~ miles by land. 17.00 miles. This proposed site is located in a TMDL Shed.

Proposed Manure Treatment/Storage Structure:
n/a -

Manure Utilization Areas: **N/A: Broker**

Additional requirements or setbacks? As Ag Facilities are not considered As contributors to the TMDL, no additional setback are required.

Pull the stream classification overlay and note the classifications for the water bodies in the drainage route.

Proposed Facility:
Freshwater

Proposed Manure Treatment/Storage Structure:
n/a

Manure Utilization Areas: N/A: ~~Broker~~

Where the classification is not Freshwater, what additional requirements or setbacks are recommended?
The nearest waters of the state is an intermittent stream located N, ~~482~~ 428 feet by land.

Pull the ~~FEMA floodplain (Flood Zones)~~ overlays or look at ~~FEMA maps~~ provided in the Animal Facility Management Plan and identify if the facility and manure utilization areas are located in the floodplain or the distance from the floodplain:

Proposed Facility: not within the 100 year floodplain.

Proposed Manure Treatment/Storage Structure: n/a

Manure Utilization Areas: (N/A: Broker)

Additional requirements or setbacks? no additional setbacks are required.

Pull the watershed overlays (12 Digit Hydro Unit) and identify the watershed in which the facility and manure utilization areas are located. Record the 12 Digit Hydro Unit under the section for agricultural facility overlay.

Proposed Facility: HUC 12 = 030501090905

Proposed Manure Treatment/Storage Structure: n/a

Manure Utilization Areas: (N/A: Broker)

Pull the Historic Preservation District overlay and review the proposed site in reference to the Historic Preservation District.

Is the facility located in a Historic Preservation District? YES or (NO)

Are any of the manure utilization areas located in a Historic Preservation District? YES NO (N/A) Manure Broker

If the proposed site is in the vicinity of the Historic Preservation District, then note the separation distance? Nickels - Milam House, S of Laurens off US 221 - located NW, ~~3.09~~ 3.08 miles by land.

Additional requirements or setbacks? Given the Air Quality memo and the by land distance, no additional setbacks are required.

Pull the Heritage Corridor overlay and review the proposed site in reference to the Heritage Corridor.
Is the facility located in the Heritage Corridor? **YES** **or** **NO**
Are any of the manure utilization areas located in the Heritage Corridor? **YES** **NO** **N/A Manure Broker**
If the proposed site is in the vicinity of the Heritage Corridor, then note the separation distance?
The Greenwood Section of the Heritage Corridor is located SW, ~~9.90~~ 9.72 mile by land.
Additional requirements or setbacks? Given the Air Quality memo and by land distance, no additional setbacks are required.

Pull the State and National Parks and Forests (Forestry) overlay and review the proposed site in reference to them.
Is the facility located in a State or National Park or Forest? **YES** **or** **NO**
Is any of the manure utilization areas located in a State or National Park or Forest?
YES **NO** **N/A Manure Broker**
If the proposed site is in the vicinity of a State or National Park or Forest, then note the separation distance? The Sumter National Forest is located E, ~~8.40~~ 8.27 miles by land.
Additional requirements or setbacks? Given the by land distance, no additional setbacks are required.

Evaluate the agricultural facility overlay and evaluate the presence of any other nonpoint sources located in the watershed. Do a query for buildings, active status, and the 10 Digit Hydro Unit recorded below. Do a query for fields, active status, and the 10 Digit Hydro Unit recorded below.
10 Digit Hydro Unit:
HUC 10 = 0305010909
Non Point Sources:
There are 25 permitted Ag Facilities, 20 poultry, 3 Dairy, 1 Swine ; 1 Turkey
There are 299 permitted land application sites.
Additional requirements or setbacks? no additional setbacks are required.

Insert the Topo Map layer after locating the USGS Quad for the application and determine the drainage routes and slope for the proposed site. You may also use DeLORME map.

Proposed Facility Drainage Route: Little River, Saluda River, Lake Murray, Saluda River, Broad River, Congaree River, Lake Marion, Santee River, Atlantic Ocean

Site Slope: ± 3 %

Proposed Manure Treatment/Storage Structure Drainage Route: N/A-

Manure Utilization Areas Drainage Route: **N/A: Broker**

Manure Utilization Area Slope: N/A- Broker

Check the maps for locations of State Designated Focus Areas in Appendix E of the Agricultural Permit Application Review Procedures Manual.

Is the facility located in a State Designated Focus Area?

YES or **NO**

Are any of the manure utilization areas located in a State Designated Focus Area? **YES**

NO **N/A Manure Broker**

If the proposed site is in the vicinity of a State Designated Focus Area, then note the separation distance? not within 50 miles from the proposed site.

Additional requirements or setbacks? no additional setbacks are required

Check the maps for locations of State and Federal Research Areas in Appendix C of the Agricultural Permit Application Review Procedures Manual or GIS.

Is the facility located in a State or Federal Research Area? **YES** or **NO**

Are any of the manure utilization areas located in a State or Federal Research Area?

YES **NO** **N/A Manure Broker**

If the proposed site is in the vicinity of the State and Federal Research Areas, then note the separation distance? USDA - Cotton Quality Research Station - is located WNW, ~~53.80~~ 53.87 miles by land

Additional requirements or setbacks? no additional setbacks are required

Review the land use information within ¼ mile of the proposed site and determine if the site is located in the vicinity of a privately owned wildlife refuge, park, or trust property (WMP or GIS)? YES or (NO)

List the land use information. mixed woods, planted Pines

If yes, what is the distance between the proposed facility and the privately owned wildlife refuge, park, or trust property? Upstate Forever - located NW, ~~30.93~~ 30.92 miles by Land.

Additional requirements or setbacks? no additional setbacks are required

TECHNICAL REVIEW:

→→→	**EVERY PLAN:**
✓	Facility location description and the zoning restrictions in the area.
p.4	Facility capacity, animal count, animal type, and normal production animal live weight at any one time.
p.4	Amount of animal manure and other animal by-products generated each year.
N/A	Amount of any scraped/separated solid animal manure generated each year.
N/A	Description of animal manure storage and storage capacity.
N/A	Description of animal manure treatment and capacity.
✓	Animal Manure Nutrient Concentrations or Analysis (DRY and/or WET).
p.6	Animal manure sampling frequency.
✓	Names, addresses, phone numbers of person(s) applying the manure, if different from applicant.
✓	Topography maps for the facility, structures, and manure utilization areas.
✓	Adjacent land use within ¼ mile of the property line.
✓	Location of inhabited dwellings and public places within ¼ mile of the property line.
✓	Locations of all water supply wells on the property and within 200 feet of the property line, or within 200 feet of the manure utilization areas.
✓	Maps showing the facility and manure utilization area boundaries and buffer zones.
✓	Right – of – ways (Utilities, roads, etc…) on the proposed site.
✓	Soils maps indicating the soil types for the facility and manure utilization areas.
✓	Description of soil types.
✓	Map showing the property boundaries and tax map numbers of the proposed site and all properties within ¼ mile of the property line.
✓	Information (map or verification) showing the location of the 100 – year floodplain in reference to the proposed site and the manure utilization areas.
✓	Setbacks verified. ***Note any waivers or reductions of setbacks:*** does ~~does not~~ At present, Applicant ~~does not~~ own property – A waiver is Included for Heath Coggins, proposed to build poultry facility on Adjacent property – Waiver will be required after both permits are issued & become effective –
✓	Distance between the ground surface and the seasonal high water table. ***Is the separation distance less than 1.5 feet at the proposed site or manure utilization areas?*** YES or (NO)

Bought property since relocation of barns – hasn't surveyed it into 3 parcels yet)

Waivers will eventually be needed if permits become effective.

N/A	Groundwater monitoring well details and proposed groundwater monitoring program (if required by Groundwater).
	Odor Abatement Plan which *may* include the following: ***Best Management Plan for Odor Control.*** (YES) or NO ***Description of treatment processes for the reduction of undesirable odor levels:*** Odor problems can be prevented or reduced through adequate drainage, runoff management, proper care to keep animals & facility clean & dry, and appropriate animal by-product removal, handling & transport. ***Additional setbacks from the property lines beyond the minimum setbacks:*** None ***Other methods or combination of these methods:*** ✓ Artificial breaking walls, trees, other vegetation to help filter & disperse dust & odor.
	Vector Abatement Plan which *shall* consist of the following: ***Normal Management Practices.*** (YES) or NO ***List of specific actions to be taken if vectors are identified as a problem?*** ✓ Remove excess building materials, remove excess feed from around houses & barns, keep grass & weeds mowed, keep all buildings free of trash & debris, proper use & servicing of bait stations, proper & timely disposal of dead animals, keep temporarily stored manure dry & covered.
	Dead Animal Disposal Plan. ✓ ***Primary Method:*** Burial & Composting ***Alternate Method:*** Burial
✓	Signed NOI forms and tax map labeled with property owner names for properties within 1320 feet of the proposed facility.
✓	Emergency Action Plan.
N/A	Written consent for reduction of setbacks, if applicable.
✓	Application Fee of $165.
✓	First year's annual operating fee of $75 for DRY and $150 for WET.
N/A	NPDES CAFO General Permit Coverage Fee of $100 if large CAFO.
	Manure Treatment and/or Storage Pond Design (if applicable): ***Freeboard:*** ***Liner type:*** ***Liner thickness:*** ***Initial Specific Discharge:*** ***Separation distance between the lowest point of the structure and the seasonal high water table:*** ***Volume (must be less than 1 million cubic feet):***
→ → →	**FOR FACILITIES THAT LAND APPLY MANURE**
	Crop Management Plan (crop type, application times) ***Adequate land available?*** YES or NO ***Crop schedule is consistent with manure storage period?*** YES or NO
✓	Type of equipment used to transport and/or spread the animal manure.
	Spray Application System plans and specifications.

N/A	Landowner information provided for each manure utilization area.
	List previous calendar years that animal manure was applied and amounts.
	Phosphorus Index results for each manure utilization area.
	Application Rates for each field.
	Signed land application agreements (including all required information) for manure utilization areas not owned by the applicant.
	Identify if the manure utilization areas are located in multiple AFMP? **YES or NO** ***Adequate land available for all manure applied?*** **YES or NO**
	Calibration methods for each piece of manure application equipment.
	Soil Monitoring Plan.
	Plans and specifications for all manure treatment or storage structures.

SECONDARY REVIEWS:

Evaluate potential for increase in pollution of the water of the State.
Is the proposed facility a No-Discharge operation? **(YES) or NO**
Is the manure handled by contract disposal with a broker? **(YES) or NO**
Is the manure handled by utilization on cropland as an alternative fertilizer?
(YES) or NO
Is the manure applied at agronomic rates? **(YES) or NO**
Are the manure application sites and application methods proposed in accordance with the Best Management Practices designed to prevent runoff to surface and ground waters? **(YES) or NO**
Determination: Given the water resources review and the Comprehensive Nutrient Management Plan states best management practices will be utilized, no anticipated increase in pollution to the waters of the state is expected.

Bureau of Air Quality Review of the Potential for an increase in pollution of the air of the State and down-wind receptors.
Recommendations or Response: As per memo dated July 19, 2016 from the Bureau of Air Quality (BAQ) an increase in pollution is not expected from this operation for this permit.

Groundwater Review of the proposed burial sites, manure utilization areas, geography, soil types on the site, aquifer vulnerability and manure storage/treatment structures.
Recommendations or Response: As per memo dated October 3, 2016 from the Bureau of Environmental Services, no zone of saturation was noted at a depth of 60 inches, therefore the site is approved for burial.

Bureau of Disease Control. Send health concerns/physician statements to Department's Medical Staff for review and recommendations, if applicable.
Recommendations or Response: four individuals were given medical packets to have their medical conditions evaluated, however only one was submitted to the Department. This persons health care provider did not indicate that she had a condition that could be exacerbated by the exposure to the poultry facilities, but did note that she continues to work on a farm.
The barns have been relocated further away from Lisbon Road and the applicant will be required to leave the 400 ft property line setback to remain

PERMIT DECISIONS:

✓	Determine if Reporting should be required for those small animal facilities with less than 500,000 pounds normal production live weight. (Large facilities are automatically required to report annually) ***Determination:*** Annual reporting will be required for this permit. *If required, Create a date event in EFIS for the annual reports.*
✓	Determine if the facility should be required to submit a comprehensive report every five years. ***Determination:*** NO *If required, Create a date event in EFIS for the comprehensive report.*
✓	Send a letter to the applicant and each person who submitted written comments or asked to be notified of the permit decision.
	Publish a notice of decision in a local newspaper of general circulation. ***Date of Notice:*** Dec 14, 2016
	Determine if the permit will contain an expiration date? **YES** or **(NO)** ***If yes, Expiration Date:*** *Enter into EFIS date events.*
	Determine if the applicant has obtained the Manure Manager's Training/Certification required by regulation? **YES** or **(NO)** *If no, training/certification must be obtained within 1 year of the effective date of the permit.* *Ensure EFIS record contains a date event for this requirement.*

Agricultural Permitting
Review Checklist Summary
Cover Page

Review Start Date 8-5-16 Review Completed Date 11-22-16

Facility Name Heath Coggins Broilers ND00 89362

Applicant's Name Heath Coggins Phone Number 864-872-4098

Type of Facility Poultry Broilers Integrator Amick

County Laurens EQC Regional Rep. Chrissy Matthews

Plan Preparer Chris Mosley, PE - AWT

Public Notice Date (Issue Date) November 30, 2016 pub wed - monday deadline

Newspaper for Public Notice Laurens County Advertiser - sat - wed deadline

Effective Date December 15, 2016

Permit Number 19,876-AG

Plan Reviewed by (print) William Chaplin

Web PN: App Rec'd 8-3-16 Bm Permitting Decision 11-23-16

Agricultural Permitting Section
Stormwater and Agricultural Permitting Division
Bureau of Water

DHEC 2518 (8/2016)

DHEC_002049

1678

Facility Name: Heath Coggins Broilers **Permit No.:** ND00 89362

Task Complete	Review Checklist Summary (Animal)
	ADMINISTRATIVE REVIEW:
✓	Verify the application form is complete.
✓	Enter the application into EFIS.
✓	Check processed and sent to Finance. ***How much was the check made out for?*** $240.00 ***Check #:*** 1877
✓	Create a facility file folder.
✓	Check Preliminary File for any previously received correspondence.
✓	Comments reviewed and counted. ***Number of Comments:*** 50+
✓	Determine if a public meeting must be held. (YES) or NO Schedule the public meeting, if required. ***Date & Time of Meeting:*** Oct 11, 2016 6:30 pm ***Location:*** Mountville Fire Dept.
✓	Send a letter to the person(s) submitting health concerns requesting that they submit a physician's statement for review. Letter sent to Barbara Page
✓	Send a copy of the application, facility map and cover memo to Bureau of Air Quality. ***Date Sent:*** 8-3-16
✓	Set up Public Notice of Application Received. ***Date went on notice:*** 8-17-16 ***Date goes off notice:*** 9-16-16
✓	Send invitation for the Public Meeting to all persons who submitted a written comment or asked to be notified. ***Date Sent:*** 9-27-16
✓	Send a copy of the application, animal facility management plan and cover memo to BEHS in Groundwater for review and recommendations. ***Date Sent:*** 8-3-16
✓	Send a copy of the application and Animal Facility Management Plan to the District office. ***Date Sent:*** 7-28-16
✓	Verify that a preliminary site inspection was performed on the proposed site submitted in this applicati ***PSI Date:*** 4-13-16
	WATER RESOURCES REVIEW: ***For this review:*** - ***"proposed animal facility" refers to the houses, stacking shed, and/or composter.*** - ***"site" refers to the "proposed animal facility", burial locations, and manure utilization areas.***
	Enter the proposed animal facility, burial locations, and manure utilization areas into the Arcview database. Barn Length: Feet: 600 = Meters: 182.88 Barn Width: Feet: 66 = Meters: 20.1168 Barn Spacing: Feet: 60 = Meters: 18.288 Fan Location (Blowing towards): Northeast Lat: 34.39533 Long: -81.95513 Public Notices Signs Posted by Chrissy Matthews on Date : 8/17/16

Pull the permitted point source discharge (NPDES) overlay and determine where the nearest upstream and downstream locations of any discharge are located and the distance from each station to the proposed site.

Point Source Discharges:

Upstream - Specialty Vermiculite / Hudgens Mine - SCG730030-1GA
Located NNW, 5.01 miles by land.

Downstream - Newberry Water Treatment Plant - SCG646047,
Located SE, 19.49 miles by land.

Additional requirements or setbacks? As this facility is classified as a no-discharge site, no additional setbacks are required.

Pull the water quality monitoring stations overlay and determine where the nearest upstream and downstream monitoring stations are located and the distance from each station to the proposed site.

Water Quality Monitoring Stations:

Upstream - None

Downstream - S-305 - Little River @ SC34 -
Located SE, 16.80 miles by land.

Pull the overlay for the drinking water intakes (Surface Water Intakes) and determine if any intakes are located downstream of the proposed site?

(YES) or **NO**

If yes, list the intakes, locations, and distance downstream:

City of Newberry - System 3610001, Well S36101,
located SE, 19.36 miles by land.

Is the proposed facility a no-discharge facility? **(YES)** or **NO**

Additional requirements or setbacks? no additional setbacks are required.

Pull the State Approved Source Water Protection Area overlay and review the proposed site in reference to these areas.

Is the facility located in a State Approved Source Water Protection Area?

YES or **(NO)**

Are any of the manure utilization areas located in a State Approved Source Water Protection Area?

YES **NO** **(N/A Manure Broker)**

If the proposed site is in the vicinity of the State Approved Source Water Protection Area, then note the separation distance? The nearest downstream SWPA is located SE, 7.41 miles by land.

Additional requirements or setbacks? no additional setbacks are required.

Pull the ground water public supply well (Source Water Protection → Public Water Supply Wells) overlay and determine if any public water supply wells are located adjacent to the proposed site? **YES** or **NO**

If yes, what is the name of the water supply well and distance between the site and the public water supply well? The nearest public water supply well is Sudie Pyles Apartments - System - 3070301, well G30181 - located SE, 3.97 miles by land.

Additional requirements or setbacks? As per R61-58, the minimum separation distances should be at least 100 ft, therefore no additional setbacks are required.

Pull the 303(d) (2014 303D List) impaired water body list overlay and list any impairment and the distance to the impairment from the proposed site.

Proposed Facility:
The nearest downstream 303D site is S-305, Little River @ SC 34, located SE, 16.80 miles by land. This proposed site is located within a TMDL

Proposed Manure Treatment/Storage Structure:
N/a

Manure Utilization Areas: **(N/A:) Broker**

Additional requirements or setbacks? Since Ag facilities are not considered as contributors to the TMDL, no additional setbacks are required.

Pull the stream classification overlay and note the classifications for the water bodies in the drainage route.

Proposed Facility:
Freshwater

Proposed Manure Treatment/Storage Structure:
N/A

Manure Utilization Areas: **(N/A:) Broker**

Where the classification is not Freshwater, what additional requirements or setbacks are recommended?
the nearest waters of the state is an intermittent stream located NE, 339 ft by land.

Pull the FEMA floodplain (Flood Zones) overlays or look at FEMA maps provided in the Animal Facility Management Plan and identify if the facility and manure utilization areas are located in the floodplain or the distance from the floodplain:

Proposed Facility: not within the 100 year flood plain

Proposed Manure Treatment/Storage Structure: N/A

Manure Utilization Areas: (N/A) **Broker**

Additional requirements or setbacks? no additional setbacks are required

Pull the watershed overlays (12 Digit Hydro Unit) and identify the watershed in which the facility and manure utilization areas are located. Record the 12 Digit Hydro Unit under the section for agricultural facility overlay.

Proposed Facility: HUC 12 = 030501090905

Proposed Manure Treatment/Storage Structure: N/A

Manure Utilization Areas: (N/A) **Broker**

Pull the Historic Preservation District overlay and review the proposed site in reference to the Historic Preservation District.

Is the facility located in a Historic Preservation District? **YES** or (**NO**)

Are any of the manure utilization areas located in a Historic Preservation District? **YES** **NO** (N/A) ~~**Manure Broker**~~

If the proposed site is in the vicinity of the Historic Preservation District, then note the separation distance? Nickels-Milam House - South of Laurens off US 221 located NW; 3.31 miles by land.

Additional requirements or setbacks? Given the Air Quality memo and the by land distance, no additional setbacks are required.

Pull the Heritage Corridor overlay and review the proposed site in reference to the Heritage Corridor.

Is the facility located in the Heritage Corridor? **YES** **or** **(NO)**

Are any of the manure utilization areas located in the Heritage Corridor? **YES** **NO** **(N/A) Manure Broker**

If the proposed site is in the vicinity of the Heritage Corridor, then note the separation distance? The Greenwood section of the Heritage Corridor is located SW, 9.85 miles by land.

Additional requirements or setbacks? Given the Air Quality memo and the by land distance, no additional setbacks are required.

Pull the State and National Parks and Forests (Forestry) overlay and review the proposed site in reference to them.

Is the facility located in a State or National Park or Forest? **YES** **or** **(NO)**

Is any of the manure utilization areas located in a State or National Park or Forest?

YES **NO** **(N/A) Manure Broker**

If the proposed site is in the vicinity of a State or National Park or Forest, then note the separation distance? The Sumter National Forest is located ENE 7.98 miles by land.

Additional requirements or setbacks? Given the Air Quality Memo and the by land distance, no additional setbacks are required.

Evaluate the agricultural facility overlay and evaluate the presence of any other nonpoint sources located in the watershed. Do a query for buildings, active status, and the 10 Digit Hydro Unit recorded below. Do a query for fields, active status, and the 10 Digit Hydro Unit recorded below.

10 Digit Hydro Unit: HUC 10 = 0305010909

Non Point Sources: There are 25 permitted Ag Facilities : 20 poultry, 3 Dairy, 1 Swine, 1 Turkey.

There are 299 permitted land application sites.

Additional requirements or setbacks? No additional setbacks are required.

Insert the Topo Map layer after locating the USGS Quad for the application and determine the drainage routes and slope for the proposed site. You may also use DeLORME map.

Proposed Facility Drainage Route: Little River, Saluda River, Lake Murray, Saluda River, Broad River, Congaree River, Lake Marion, Santee River Atlantic Ocean -

Site Slope: ≈ 3%

Proposed Manure Treatment/Storage Structure Drainage Route: N/A

Manure Utilization Areas Drainage Route: (N/A) **Broker**

Manure Utilization Area Slope: N/A - Broker

Check the maps for locations of State Designated Focus Areas in Appendix E of the Agricultural Permit Application Review Procedures Manual.

Is the facility located in a State Designated Focus Area?

YES or (**NO**)

Are any of the manure utilization areas located in a State Designated Focus Area? **YES** **NO** (**N/A**) **Manure Broker**

If the proposed site is in the vicinity of a State Designated Focus Area, then note the separation distance? Not within 50 miles from the proposed site

Additional requirements or setbacks? no additional setbacks are required.

Check the maps for locations of State and Federal Research Areas in Appendix C of the Agricultural Permit Application Review Procedures Manual or GIS.

Is the facility located in a State or Federal Research Area? **YES** or (**NO**)

Are any of the manure utilization areas located in a State or Federal Research Area?

YES **NO** (**N/A**) **Manure Broker**

If the proposed site is in the vicinity of the State and Federal Research Areas, then note the separation distance? USDA Cotton Quality Research Station is located WNW, 54.17 miles by land.

Additional requirements or setbacks? no additional setbacks are required.

Review the land use information within ¼ mile of the proposed site and determine if the site is located in the vicinity of a privately owned wildlife refuge, park, or trust property (WMP or GIS)? YES or NO

List the land use information. Mixed Woods, planted Pines.

If yes, what is the distance between the proposed facility and the privately owned wildlife refuge, park, or trust property? Upstate Forever - located NW, 31.13 miles by land.

Additional requirements or setbacks? no additional setbacks are required.

TECHNICAL REVIEW:

→→→	**EVERY PLAN:**
✓	Facility location description and the zoning restrictions in the area.
p. 4	Facility capacity, animal count, animal type, and normal production animal live weight at any one time.
p. 4	Amount of animal manure and other animal by-products generated each year.
N/A	Amount of any scraped/separated solid animal manure generated each year.
N/A	Description of animal manure storage and storage capacity.
N/A	Description of animal manure treatment and capacity.
✓	Animal Manure Nutrient Concentrations or Analysis (DRY and/or WET).
p 6	Animal manure sampling frequency.
✓	Names, addresses, phone numbers of person(s) applying the manure, if different from applicant.
✓	Topography maps for the facility, structures, and manure utilization areas.
✓	Adjacent land use within ¼ mile of the property line.
✓	Location of inhabited dwellings and public places within ¼ mile of the property line.
✓	Locations of all water supply wells on the property and within 200 feet of the property line, or within 200 feet of the manure utilization areas.
✓	Maps showing the facility and manure utilization area boundaries and buffer zones.
✓	Right – of – ways (Utilities, roads, etc…) on the proposed site.
✓	Soils maps indicating the soil types for the facility and manure utilization areas.
✓	Description of soil types.
✓	Map showing the property boundaries and tax map numbers of the proposed site and all properties within ¼ mile of the property line.
✓	Information (map or verification) showing the location of the 100 – year floodplain in reference to the proposed site and the manure utilization areas.
✓	Setbacks verified. ***Note any waivers or reductions of setbacks:*** At present applicant does not own property, A waiver is included for Jim Young and David Goggins (proposed facilities to be constructed on adjacent property) Waiver
✓	Distance between the ground surface and the seasonal high water table. ***Is the separation distance less than 1.5 feet at the proposed site or manure utilization areas?*** **YES or NO**

N/A | Groundwater monitoring well details and proposed groundwater monitoring program (if required by Groundwater).

Odor Abatement Plan which *may* include the following:
Best Management Plan for Odor Control. YES or NO
Description of treatment processes for the reduction of undesirable odor levels:
Odor problems can be prevented or reduced through adequate drainage, litter management, proper care to keep animals & facility clean & dry and appropriate animal by-product removal, handling and transport.
Additional setbacks from the property lines beyond the minimum setbacks:
none

✓ ***Other methods or combination of these methods:***
Artificial breaks (walls, trees, other vegetation to help filter & disperse dust & odor

Vector Abatement Plan which *shall* consist of the following:
Normal Management Practices. YES or NO
List of specific actions to be taken if vectors are identified as a problem?
✓ Remove excess building materials, remove excess feed from around houses & bins, keep grass & weeds mowed, keep all buildings free of trash & debris, proper use & servicing of bait stations, prompt & timely disposal of dead animals & keep temporarily stored manure dry & covered.

✓ Dead Animal Disposal Plan.
Primary Method: Burial
Alternate Method: Burial

✓ Signed NOI forms and tax map labeled with property owner names for properties within 1320 feet of the proposed facility.

✓ Emergency Action Plan.

✓ Written consent for reduction of setbacks, if applicable.

✓ Application Fee of $165.

✓ First year's annual operating fee of $75 for DRY and $150 for WET.

N/A | NPDES CAFO General Permit Coverage Fee of $100 if large CAFO.

Manure Treatment and/or Storage Pond Design (if applicable):
Freeboard:
Liner type:
Liner thickness:
Initial Specific Discharge:
Separation distance between the lowest point of the structure and the seasonal high water table:
Volume (must be less than 1 million cubic feet):

→ → → **FOR FACILITIES THAT LAND APPLY MANURE**

Crop Management Plan (crop type, application times)
Adequate land available? YES or NO
Crop schedule is consistent with manure storage period? YES or NO

✓ Type of equipment used to transport and/or spread the animal manure.

Spray Application System plans and specifications.

N/A	Landowner information provided for each manure utilization area.
	List previous calendar years that animal manure was applied and amounts.
	Phosphorus Index results for each manure utilization area.
	Application Rates for each field.
	Signed land application agreements (including all required information) for manure utilization areas not owned by the applicant.
	Identify if the manure utilization areas are located in multiple AFMP? **YES or NO** ***Adequate land available for all manure applied?*** **YES or NO**
	Calibration methods for each piece of manure application equipment.
	Soil Monitoring Plan.
	Plans and specifications for all manure treatment or storage structures.

SECONDARY REVIEWS:

Evaluate potential for increase in pollution of the water of the State.
Is the proposed facility a No-Discharge operation? **(YES) or NO**
Is the manure handled by contract disposal with a broker? **(YES) or NO**
Is the manure handled by utilization on cropland as an alternative fertilizer?
(YES) or NO
Is the manure applied at agronomic rates? **(YES) or NO**
Are the manure application sites and application methods proposed in accordance with the Best Management Practices designed to prevent runoff to surface and ground waters? **(YES) or NO**
Determination: Given the water resources review and the comprehensive Nutrient Management Plan states best management practices will be utilized, no anticipated increase in pollution to the waters of the state is expected.

Bureau of Air Quality Review of the Potential for an increase in pollution of the air of the State and down-wind receptors.
Recommendations or Response: As per memo dated August 18, 2016, from the Bureau of Air Quality, (BAQ) an increase in pollution is not expected from this operation for this permit.

Groundwater Review of the proposed burial sites, manure utilization areas, geography, soil types on the site, aquifer vulnerability and manure storage/treatment structures.
Recommendations or Response: As per memo dated October 3, 2016 from the Bureau of Environmental Health Services, no zone of seasonal saturation was noted @ two specific locations, therefore the site is approved for burial.

Bureau of Disease Control. Send health concerns/physician statements to Department's Medical Staff for review and recommendations, if applicable.
Recommendations or Response: Four individuals were given medical packets to have their medical conditions evaluated, however only one was submitted back to the Department, where the personal health care provider did not indicate that she had a condition that could be exacerbated by exposure to the proposed poultry facilities, but did note that she continues to work on a farm - the 400 ft property line setback will be required to remain vegetated as is.

PERMIT DECISIONS:

✓	Determine if Reporting should be required for those small animal facilities with less than 500,000 pounds normal production live weight. (Large facilities are automatically required to report annually) ***Determination:*** Annual Reporting is Req'd for this permit. *If required, Create a date event in EFIS for the annual reports.*
✓	Determine if the facility should be required to submit a comprehensive report every five years. ***Determination:*** NO *If required, Create a date event in EFIS for the comprehensive report.*
✓	Send a letter to the applicant and each person who submitted written comments or asked to be notified of the permit decision.
	Publish a notice of decision in a local newspaper of general circulation. ***Date of Notice:*** November 30, 2016
	Determine if the permit will contain an expiration date? **YES** or **(NO)** ***If yes, Expiration Date:*** _____ *Enter into EFIS date events.*
	Determine if the applicant has obtained the Manure Manager's Training/Certification required by regulation? **YES** or **(NO)** *If no, training/certification must be obtained within 1 year of the effective date of the permit.* *Ensure EFIS record contains a date event for this requirement.*

dhec
Healthy People. Healthy Communities.

Agricultural Permitting
Review Checklist Summary
Cover Page

Review Start Date 8-5-16 Review Completed Date 12-13-16

Facility Name Jim Young Broilers NDO0 89354

Applicant's Name Jim Young Phone Number 803-479-1363

Type of Facility Poultry Broilers Integrator Amick

County Laurens EQC Regional Rep. Chrissy Matthews

Plan Preparer Chas Mosley, PE, AWT

Public Notice Date (Issue Date) December 21, 2016
deadline - Wed 5pm - Sat = Web 5pm

Newspaper for Public Notice Laurens County Advertiser pub. Web / Sat.

Effective Date January 5, 2017

Permit Number 19,889-AG

Plan Reviewed by (print) William Chaplin

Web PN: App Rec'd 7-27-16 BM Permitting Decision 12-13-16 wpc

Agricultural Permitting Section
Stormwater and Agricultural Permitting Division
Bureau of Water

DHEC 2518 (8/2016)

DHEC_003171

1689

Facility Name: Jim Young Broilers **Permit No.:** ND00 89354

Task Complete	Review Checklist Summary (Animal)
	ADMINISTRATIVE REVIEW:
-	Verify the application form is complete.
✓	Enter the application into EFIS.
✓	Check processed and sent to Finance. ***How much was the check made out for?*** $ 240.00 ***Check #:*** 2894
✓	Create a facility file folder.
✓	Check Preliminary File for any previously received correspondence.
✓	Comments reviewed and counted. ***Number of Comments:*** 454
✓	Determine if a public meeting must be held. (YES) or NO Schedule the public meeting, if required. ***Date & Time of Meeting:*** Oct 11, 2016 6:30 ***Location:*** Montville Fire Dept.
✓	Send a letter to the person(s) submitting health concerns requesting that they submit a physician's statement for review. Barbara Zegen -
✓	Send a copy of the application, facility map and cover memo to Bureau of Air Quality. ***Date Sent:*** 7-26-16
✓	Set up Public Notice of Application Received. ***Date went on notice:*** 8-9-16 ***Date goes off notice:*** 9-8-16
✓	Send invitation for the Public Meeting to all persons who submitted a written comment or asked to be notified. ***Date Sent:*** Sept 27, 2016
✓	Send a copy of the application, animal facility management plan and cover memo to BEHS in Groundwater for review and recommendations. ***Date Sent:*** 7-26-16
✓	Send a copy of the application and Animal Facility Management Plan to the District office. ***Date Sent:*** 7-18-16
✓	Verify that a preliminary site inspection was performed on the proposed site submitted in this applicati ***PSI Date:*** 4-13-16
	WATER RESOURCES REVIEW: ***For this review:*** - ***"proposed animal facility" refers to the houses, stacking shed, and/or composter.*** - ***"site" refers to the "proposed animal facility", burial locations, and manure utilization areas.***
	Enter the proposed animal facility, burial locations, and manure utilization areas into the Arcview database. Barn Length: Feet: 600 = Meters: 182.88 Barn Width: Feet: 66 = Meters: 20.1168 Barn Spacing: Feet: 60 = Meters: 18.288 Fan Location (Blowing towards): NE Lat: 34.390054 Long: -81.955398 Public Notices Signs Posted by Bob Bailey on Date : 8-9-16

DHEC_003172

Pull the permitted point source discharge (NPDES) overlay and determine where the nearest upstream and downstream locations of any discharge are located and the distance from each station to the proposed site.

Point Source Discharges:

Upstream - Specialty Vermiculite / Hudgens Mine - SCG 730030-1BA
located NNW, ~~5.23~~ 5.12 miles by land.

Downstream - Newberry Water Treatment Plant - SCG646047,
located SE, 19.28 miles by land.

Additional requirements or setbacks? As this facility is classified as a no-discharge facility, no additional setbacks are required.

Pull the water quality monitoring stations overlay and determine where the nearest upstream and downstream monitoring stations are located and the distance from each station to the proposed site.

Water Quality Monitoring Stations:

Upstream - None

Downstream - S-305 Little River @ SC34
located SE, ~~16.58~~ 16.59 miles by land.

Pull the overlay for the drinking water intakes (Surface Water Intakes) and determine if any intakes are located downstream of the proposed site?

(YES) or NO

If yes, list the intakes, locations, and distance downstream:

City of Newberry - System 3610001, Well - S36101
located SE, 19.06 miles by land.

Is the proposed facility a no-discharge facility? **(YES) or NO**

Additional requirements or setbacks?

no additional setbacks are required.

Pull the State Approved Source Water Protection Area overlay and review the proposed site in reference to these areas.

Is the facility located in a State Approved Source Water Protection Area?

YES or (NO)

Are any of the manure utilization areas located in a State Approved Source Water Protection Area?

YES (NO) N/A Manure Broker

If the proposed site is in the vicinity of the State Approved Source Water Protection Area, then note the separation distance? The nearest SWPA (downstream) is located SE, ~~7.21~~ 7.22 miles by land.

Additional requirements or setbacks? No additional setbacks are required.

Pull the ground water public supply well (Source Water Protection → Public Water Supply Wells) overlay and determine if any public water supply wells are located adjacent to the proposed site? YES or NO

If yes, what is the name of the water supply well and distance between the site and the public water supply well? The nearest public water supply well is: Sudie Pyles Apartments, System - 3070301, well G30181, located SE, 3.83 miles by land.

Additional requirements or setbacks? As per R61-58, the minimum separation distance should be at least 100 ft, therefore, no additional setbacks are required.

Pull the 303(d) (2014 303D List) impaired water body list overlay and list any impairment and the distance to the impairment from the proposed site.

Proposed Facility:
The nearest downstream 303d site is S-305, Little River @ SC34, located SE, ~~11.58~~ miles by land. 16.59 miles by land
This proposed site is located in a TMDL.

Proposed Manure Treatment/Storage Structure:
N/A

Manure Utilization Areas: **N/A: Broker**
Field MB - S-305, Little River @ SC34, located SSE, 13.04 miles by land. not on the list.
Field Calvin - S-042 - Bush River @ SC 560 (S of Joanna) located SSE, 5.98 miles by land. Dissolved Oxygen is the impairment.

Additional requirements or setbacks? As Ag Facilities are not considered as a contributor to the TMDL, no additional setbacks are required.

Pull the stream classification overlay and note the classifications for the water bodies in the drainage route.

Proposed Facility:
Freshwater

Proposed Manure Treatment/Storage Structure:
N/A

Manure Utilization Areas: **N/A: Broker**
Freshwater

Where the classification is not Freshwater, what additional requirements or setbacks are recommended?
Nearest waters of state to proposed site: ~~1585ft~~ to intermittent stream
no additional setbacks are required. 1446 ft
426' indicated on application - verified by site visit by consultants.

DHEC_003174

1692

~~Pull the FEMA floodplain (Flood Zones) overlays or look at FEMA maps provided in the Animal Facility~~ Management Plan and identify if the facility and manure utilization areas are located in the floodplain or the distance from the floodplain:

Proposed Facility: not within the 100 year floodplain

Proposed Manure Treatment/Storage Structure: n/a

Manure Utilization Areas: ~~N/A. Broker~~ not within the 100 year floodplain.

Additional requirements or setbacks? no additional setbacks are required.

Pull the watershed overlays (12 Digit Hydro Unit) and identify the watershed in which the facility and manure utilization areas are located. Record the 12 Digit Hydro Unit under the section for agricultural facility overlay.

Proposed Facility: HUC 12 = 030501090905

Proposed Manure Treatment/Storage Structure:

Manure Utilization Areas: ~~N/A. Broker~~
Calvin, Walnut, Big Field, Alfafa - HUC 12 = 030501091204
Triangle Field - HUC12 = 030501090904
35 Acre Field, Zone 1-4, Michael House, Michael Back - HUC12 = 030501090906

Pull the Historic Preservation District overlay and review the proposed site in reference to the Historic Preservation District.

Is the facility located in a Historic Preservation District? YES or (NO)

Are any of the manure utilization areas located in a Historic Preservation District? YES (NO) ~~N/A Manure Broker~~

If the proposed site is in the vicinity of the Historic Preservation District, then note the separation distance? Nichols - Milam House, S of Laurens off US 221 located NW 3.48 miles by land.

Additional requirements or setbacks? Given the Air Quality memo, no additional setbacks are required.

DHEC_003175

1693

Pull the Heritage Corridor overlay and review the proposed site in reference to the Heritage Corridor.
Is the facility located in the Heritage Corridor? **YES** or (**NO**)
Are any of the manure utilization areas located in the Heritage Corridor? **YES** (**NO**)
~~**N/A Manure Broker**~~
If the proposed site is in the vicinity of the Heritage Corridor, then note the separation distance?
The Greenwood Section of the Heritage Corridor is located SW, ~~9.50~~ 9.60 miles by land.
Additional requirements or setbacks? Given the Air Quality Memo and by land distance, no additional setbacks are required.

Pull the State and National Parks and Forests (Forestry) overlay and review the proposed site in reference to them.
Is the facility located in a State or National Park or Forest? **YES** or (**NO**)
Is any of the manure utilization areas located in a State or National Park or Forest?
YES (**NO**) ~~**N/A Manure Broker**~~
If the proposed site is in the vicinity of a State or National Park or Forest, then note the separation distance? The Sumter National Forest is located E, ~~8.24~~ 8.12 miles by land.
Additional requirements or setbacks? Given the by land distance, no additional setbacks are required

Evaluate the agricultural facility overlay and evaluate the presence of any other nonpoint sources located in the watershed. Do a query for buildings; active status, and the 10 Digit Hydro Unit recorded below. Do a query for fields, active status, and the 10 Digit Hydro Unit recorded below.
10 Digit Hydro Unit: HUC 10 = 0305010909

Non Point Sources:
There are 25 permitted Ag Facilities, 20 poultry, 3 Dairy, 1 Swine, 1 Turkey

There are 299 permitted land application sites.

Additional requirements or setbacks? no additional setbacks are required.

~~Insert the Topo Map layer after locating the USGS Quad for the application and determine the drainage~~ routes and slope for the proposed site. You may also use DeLORME map.

Proposed Facility Drainage Route: Little River, Saluda River, Lake Murray, Saluda River, Broad River, Congaree River, Lake Marion, Santee River, Atlantic Ocean

Site Slope: ≈ 6% Slope

Proposed Manure Treatment/Storage Structure Drainage Route: N/A

Manure Utilization Areas Drainage Route: ~~N/A: Broker~~
Calvin, Walnut, Big Field, Alfalfa, Shell creek, Bush River, Lake Murray, Saluda River, Broad River, Congaree River, Lake Marion, Santee River, Atlantic Ocean. Triangle Field, Simmons Creek, Little River, Saluda River, Lake Murray, etc - 35 acre field, Zone 1-4, Michael House, Michael Back - Quaker Creek, Garrison Creek, Little River, Etc. -

Manure Utilization Area Slope: See Attached Sheet.

Check the maps for locations of State Designated Focus Areas in Appendix E of the Agricultural Permit Application Review Procedures Manual.

Is the facility located in a State Designated Focus Area?
YES or **(NO)**

Are any of the manure utilization areas located in a State Designated Focus Area? **YES**
(NO) **N/A Manure Broker**

If the proposed site is in the vicinity of a State Designated Focus Area, then note the separation distance? not within 50 miles of Proposed Site

Additional requirements or setbacks? no additional setbacks are required.

Check the maps for locations of State and Federal Research Areas in Appendix C of the Agricultural Permit Application Review Procedures Manual or GIS.

Is the facility located in a State or Federal Research Area? **YES** or **(NO)**

Are any of the manure utilization areas located in a State or Federal Research Area?
YES **(NO)** **N/A Manure Broker**

If the proposed site is in the vicinity of the State and Federal Research Areas, then note the separation distance? USDA - Cotton Quality Research Station is located WNW, 54.21 miles by land.

Additional requirements or setbacks? no additional setbacks are required.

Review the land use information within ¼ mile of the proposed site and determine if the site is located in the vicinity of a privately owned wildlife refuge, park, or trust property (WMP or GIS)? YES or (NO)

List the land use information. mixed woods, planted Pines

If yes, what is the distance between the proposed facility and the privately owned wildlife refuge, park, or trust property? Upstate Forever, located NW, 3.33 miles by land ✓

Additional requirements or setbacks? no additional setbacks are required.

TECHNICAL REVIEW:

→→→	**EVERY PLAN:**
✓	Facility location description and the zoning restrictions in the area.
p.4	Facility capacity, animal count, animal type, and normal production animal live weight at any one time.
p.4	Amount of animal manure and other animal by-products generated each year.
N/A	Amount of any scraped/separated solid animal manure generated each year.
N/A	Description of animal manure storage and storage capacity.
N/A	Description of animal manure treatment and capacity.
✓	Animal Manure Nutrient Concentrations or Analysis (DRY) and/or WET).
p.6	Animal manure sampling frequency. L&M Brokers 19,463-AG
✓	Names, addresses, phone numbers of person(s) applying the manure, if different from applicant.
✓	Topography maps for the facility, structures, and manure utilization areas.
✓	Adjacent land use within ¼ mile of the property line.
✓	Location of inhabited dwellings and public places within ¼ mile of the property line.
—	Locations of all water supply wells on the property and within 200 feet of the property line, or within 200 feet of the manure utilization areas.
—	Maps showing the facility and manure utilization area boundaries and buffer zones.
—	Right – of – ways (Utilities, roads, etc…) on the proposed site.
—	Soils maps indicating the soil types for the facility and manure utilization areas.
—	Description of soil types.
—	Map showing the property boundaries and tax map numbers of the proposed site and all properties within ¼ mile of the property line.
—	Information (map or verification) showing the location of the 100 – year floodplain in reference to the proposed site and the manure utilization areas.
	Setbacks verified. ***Note any waivers or reductions of setbacks:*** At present, Applicant does not own property. A waiver is included from Health Cognizant, proposed to build poultry facility on Adjacent "parcel" Waiver will be required after both parties receive effective permits.
	Distance between the ground surface and the seasonal high water table. ***Is the separation distance less than 1.5 feet at the proposed site or manure utilization areas?*** **YES or (NO)**

N/A | ~~Groundwater monitoring well details and proposed groundwater monitoring program (if required~~ by Groundwater).

Odor Abatement Plan which *may* include the following:
Best Management Plan for Odor Control. (YES) or NO
Description of treatment processes for the reduction of undesirable odor levels:
Odor problems can be prevented or reduced through adequate drainage, runoff management, proper care to keep animals & facility clean and dry and appropriate animal by product removal, handling, transport.
Additional setbacks from the property lines beyond the minimum setbacks:
none
Other methods or combination of these methods:
Artificial breaking walls, trees, other vegetation to help filter and disperse dust, odor.

Vector Abatement Plan which *shall* consist of the following:
Normal Management Practices. (YES) or NO
List of specific actions to be taken if vectors are identified as a problem?
Remove excess building materials, remove excess feed from around houses/bins keep grass & weeds mowed, keep all buildings free of trash and debris, proper use, servicing & bait stations, proper, timely disposal of dead animals, keep temporarily stored manure dry, covered.

✓ Dead Animal Disposal Plan.
Primary Method: Burial
Alternate Method: Burial

✓ Signed NOI forms and tax map labeled with property owner names for properties within 1320 feet of the proposed facility.

✓ Emergency Action Plan.

✓ Written consent for reduction of setbacks, if applicable.

✓ Application Fee of $165.

✓ First year's annual operating fee of ~~$75 for DRY~~ and $150 for WET.

N/A | NPDES CAFO General Permit Coverage Fee of $100 if large CAFO.

Manure Treatment and/or Storage Pond Design (if applicable):
Freeboard:
Liner type:
Liner thickness:
Initial Specific Discharge:
Separation distance between the lowest point of the structure and the seasonal high water table:
Volume (must be less than 1 million cubic feet):

→ ✱ → **FOR FACILITIES THAT LAND APPLY MANURE**

Crop Management Plan (crop ~~type~~, application times)
Adequate land available? (YES) or NO
Crop schedule is consistent with manure storage period? (YES) or NO

✓ Type of equipment used to transport and/or spread the animal manure. – pull behind solid Spreader

N/A | Spray Application System plans and specifications.

✓	Landowner information provided for each manure utilization area.
N/A	List previous calendar years that animal manure was applied and amounts.
✓	Phosphorus Index results for each manure utilization area.
✓	Application Rates for each field.
✓	Signed land application agreements (including all required information) for manure utilization areas not owned by the applicant.
✓	Identify if the manure utilization areas are located in multiple AFMP? **YES or (NO)** ***Adequate land available for all manure applied?*** **YES or (NO)** Broken!
✓	Calibration methods for each piece of manure application equipment.
✓	Soil Monitoring Plan.
N/A	Plans and specifications for all manure treatment or storage structures.

SECONDARY REVIEWS:

Evaluate potential for increase in pollution of the water of the State.
Is the proposed facility a No-Discharge operation? (YES) or NO
Is the manure handled by contract disposal with a broker? (YES) or (NO)
Is the manure handled by utilization on cropland as an alternative fertilizer?
(YES) or NO Some land applied, some Brokered
Is the manure applied at agronomic rates? (YES) or NO
Are the manure application sites and application methods proposed in accordance with the Best Management Practices designed to prevent runoff to surface and ground waters? (YES) or NO
Determination: Given the water resources review and the Comprehensive Nutrient Management Plan states best management practices will be utilized, no anticipated increase in pollution to the waters of the state is expected.

Bureau of Air Quality Review of the Potential for an increase in pollution of the air of the State and down-wind receptors.
Recommendations or Response: As per memo dated July 28, 2016 from the Bureau of Air Quality (BAQ), an increase in pollution is not expected from this operation. The BAQ does not recommend any additional setbacks for this permit.

Groundwater Review of the proposed burial sites, manure utilization areas, geography, soil types on the site, aquifer vulnerability and manure storage/treatment structures.
Recommendations or Response: As per memo dated October 3, 2016 from the Bureau of Environmental Health Services, the zone of seasonal saturation was not indicated @ 60", therefore the site is suitable for burial.

Bureau of Disease Control. Send health concerns/physician statements to Department's Medical Staff for review and recommendations, if applicable.
Recommendations or Response: Several individuals were given medical packets to have their health evaluated as it relates to this facility, however only one was submitted to the department for evaluation. This person's health evaluator did not indicate that she had a condition that could be exacerbated by exposure to the poultry facility, but did note this person continues to work on a farm. The barns have been relocated further away from Lisbon Road and the applicant will be required to have the 400 ft property line setback vegetated as is.

DHEC_003180

1698

PERMIT DECISIONS:

✓	Determine if Reporting should be required for those small animal facilities with less than 500,000 pounds normal production live weight. (Large facilities are automatically required to report annually) ***Determination:*** Annual Reporting will be required for this permit *If required, Create a date event in EFIS for the annual reports.*
✓	Determine if the facility should be required to submit a comprehensive report every five years. ***Determination:*** NO *If required, Create a date event in EFIS for the comprehensive report.*
✓	Send a letter to the applicant and each person who submitted written comments or asked to be notified of the permit decision.
	Publish a notice of decision in a local newspaper of general circulation. ***Date of Notice:***
✓	Determine if the permit will contain an expiration date? **YES** or (**NO**) ***If yes, Expiration Date:*** *Enter into EFIS date events.*
✓	Determine if the applicant has obtained the Manure Manager's Training/Certification required by regulation? **YES** or (**NO**) *If no, training/certification must be obtained within 1 year of the effective date of the permit. Ensure EFIS record contains a date event for this requirement.*

MUA Water Resource Review Checklist Spreadsheet

H.P.D.= Historic Preservation District **SWPA=Source Water Protection Area** **All distances by land**

Tract	Field	In State Approved SWPA (y/n)	303(d) List Site	Distance to 303(d) list site	Stream Classification ~~& Distence to Stream~~	FEMA Floodplain; in 100 year Floodplain (y/n)	12 Digit Hydro Unit	H.P.D. (y/n)	Heritage Corridor (y/n)	State or National Park or Forest (y/n)	MUA Slope	State Desig. Focus Area (y/n)	State or Federal Research Area (y/n)
	Triangle Field	N	S-042	4.23 mi.	Fw	N	030501090904	N	N	N	≈1%	N	N
	35Acre Field	N		4.13 mi.			030501090906				~1%		
	Zone 1-4	N		4.11 mi.			030501090906				~1%		
	Michael House	N		4.10 mi.			030501090906				~4%		
	Michael Back	N		3.79 mi.			030501090906				≈2%		
	Calvins	N		6.00 mi.			030501091204				≈4%		
	Walnut	N		6.00 mi.			030501091204				~3%		
	Big Field	N		6.00 mi.			030501091204				~2%		
	Alfalfa	N		6.00 mi.			030501091204				~2%		

DHEC_003182

1700

dhec
Healthy People. Healthy Communities.

December 14, 2016

Concerned Citizen

RE: David Coggins Broilers, (Broiler Facility)

Dear Concerned Citizen:

The Department is sending this letter in response to your concerns in reference to the above-mentioned facility. After due consideration of the facts applicable to the above-named facility and the requirements and policies expressed in the Pollution Control Act of South Carolina and appropriate regulations, the Department of Health and Environmental Control has determined that the construction permit should be issued.

The concerns raised in the public meeting and the letters to the Department were carefully considered during this application review process. Concerns over odors, vectors, water quality, and dead animal disposal are concerns the Department's regulation address. The applicant's Comprehensive Nutrient Management Plan, prepared by Chris Mosley, PE, Agri-Waste Technology, Inc. has measures for controlling odors, vectors, and protecting groundwater. The permit will require the applicant to leave the 400 foot property line setback along Lisbon Road vegetated as it currently exists. The applicant was required to relocate his barns to accommodate the previous requirement. The Department has also included, with this letter, the answers to the questions asked during the public meeting.

This permit will be issued on December 14, 2016 and become effective December 29, 2016, provided that no request for board review is filed. Once the construction permit is issued, any person(s) can request a review of the issuance of that permit, as outlined in the "Guide for Board Review" enclosed with this mailing.

If you have any further questions regarding the review procedures, you may contact the Legal Office, Department of Health and Environmental Control, 2600 Bull St., Columbia, SC 29201 or by calling (803) 898-3350. If you have any questions regarding the permit decision, please contact me at (803) 898-3532.

Sincerely,

William Chaplin

William Chaplin
SC DHEC - Bureau of Water
Agricultural Permitting Section

cc: Chrissy Matthews, Upstate BEHS Greenwood EA Office, SCDHEC
David Coggins, applicant
"Guide for Board Review" enclosure
Questions and Answers from public meeting enclosure

dhec
S.C. Department of Health and Environmental Control

BUREAU OF WATER
Agricultural Permit
ND0089338

Permission is hereby granted to:

David Coggins
1094 Lisbon Road
Mountville, SC 29370

for construction and operation of a **NO-DISCHARGE** agricultural manure and animal by-products treatment and storage system in accordance with the construction plans, specifications, engineering report, animal facility management plan and construction permit application prepared by Chris Mosley, P.E., Agri-Waste Technology, Inc.

COUNTY: Laurens

Project Description:
1. Construction of six (6) new poultry broiler houses.
2. Housed broilers raised on earthen floor - covered with wood shavings.
3. Contract disposal of the manure with a permitted manure broker per plans and specifications.
4. Other conditions as stated in animal facility management plan.
5. Treat 988 tons of manure generated as follows:

6 houses X 27,000 birds/house X 4.5 flocks/year	= 729,000 birds per year
162,000 broilers X 4.55 lbs. Av. Live Wt.	= 737,100 lbs normal live weight
162,000 broilers X 6.1 tons/year/1000 bird spaces	= 988 tons/year waste production

Special Conditions: (See attachments).

Permit Number: 19,886-AG

Date of Issue: December 14, 2016 **Effective Date:** December 29, 2016

Expiration Dates: Unless construction begins prior to December 27, 2018, and is completed prior to December 26, 2019, this permit will expire. In accepting this permit, the owner agrees to the admission of properly authorized persons at all reasonable hours for the purpose of sampling and inspection.

Treatment Plant Classification: Group 0

WRITTEN AUTHORIZATION TO PLACE THIS SYSTEM INTO OPERATION MUST BE OBTAINED FROM THE DEPARTMENT PRIOR TO PLACING ANIMALS IN THE FACILITY.

Charles J. Williams, Manager
Groundwater Protection and Agricultural Permitting

CJW/WPC/el

cc: Chrissy Matthews, Upstate BEHS, Greenwood, Environmental Affairs office
Chris Mosley, P.E., Agri-Waste Technology, Inc, Apex, NC

SPECIAL CONDITIONS
(Poultry)

1. Operate and maintain the waste system, including all special conditions in accordance with Waste Management Plan developed by Chris Mosley, P.E., Agri-Waste Technology, Inc. Operate and maintain this waste management system in accordance with State and Federal law so as to prevent discharges to the environment. Should this waste management plan fail to function as intended, additional control or treatment of the wastes may be required.

2. Disposal of daily mortality will be burial and emergency mortality will be burial in the approved DHEC burial sites, unless an alternate method is selected and approved by the Department. If a massive die-off occurs, notify your local inspector immediately, Chrissy Matthews at (864) 227-5915. If you are calling after-hours, please call the Department's twenty four hour number (888) 481-0125 or (803) 253-6488. If you plan to bury the dead animals from a massive die-off, a DHEC representative must approve the site prior to burial. The Department recommends that you develop an emergency plan for a massive die-off situation prior to the occurrence and submit this plan to your local inspector for approval. If a plan and/or site are pre-approved, then you would only be required to notify the Department of the massive die-off, and then implement the pre-approved plan for disposal.

3. If you have mortality on the farm that may be attributed to disease or toxin exposure, please contact Dr. Julie Helm of the State Veterinarian office at (803) 788-2260 for additional assistance in the handling and disposal of infected birds. The State Veterinarian office recommends that the diagnostic lab evaluate samples for deaths in excess of 1% of a house population. This action can help identify disease outbreaks on the farm. The State Veterinarian Office can also provide guidance in preventing the spread of diseases.

4. You are responsible for obtaining any other local permits that may be required for this project, including a building permit and **stormwater permit**. Please contact your local county offices to inquire about required permits.

5. Drinking water wells installed on this site to provide water for animal or human consumption must be installed with at least the following minimum setbacks required in regulation 61-71 (Well Standards & Regulations):

(a) Sewer lines	20 feet
(b) Lakes, streams, surface-water bodies	50 feet
(c) Septic tanks/tile fields	50 feet
(d) Animal feedlots, barns, stables	50 feet
(e) Waste disposal - land application sites	100 feet
(f) Waste treatment lagoons	100 feet
(g) Herbicide, pesticide & petroleum handling/storage sites	100 feet

A permit for private wells must be obtained from the Department prior to installation. Enclosed is a copy of the application for a well permit. If you have any questions on well permitting, please contact Well Permitting at (803) 898-4174.

SPECIAL CONDITIONS (continued)
(Poultry)

6. Annual reporting is required for this permit.
   An annual report is due by January 1st of each year (starting in 2018) and must include the following:

   (a) Waste sampling results for the last year, if applicable, and the latest rolling average.
   (b) Soil monitoring results, if applicable.
   (c) Groundwater monitoring results, if applicable.
   (d) Calculated application rates for all waste utilization areas, if applicable.
   (e) The adjusted application rates, if applicable, based on the most recent animal waste sampling and soil samples. The application rate change could also be due to a change in field use, crop grown or other factors.

   **Annual Reports should be sent to the following address:*
   SC Department of Health & Environmental Control
   Bureau of Water
   Compliance Assurance Division
   2600 Bull Street
   Columbia, SC 29201

7. **CAMM Certification is required within one year from the effective date of this permit.**

8. **The 400 foot property line setback along Lisbon Road shall remain vegetated as it currently exists for as long as the facility is in operation.**

dhec
Healthy People. Healthy Communities.

December 14, 2016

David Coggins
1094 Lisbon Road
Mountville, SC 29370

RE: Permit No. 19,886-AG, David Coggins Broilers, ND0089338 - Laurens County

Dear Mr. Coggins,

Enclosed is a State Agricultural Permit for the above-referenced facility. Construction and operation is to be performed in accordance with this permit and the supporting agricultural facility management plan approved by this Office. Once the construction permit is issued, any person(s) can request a review of the issuance of that permit, as outlined in the enclosed document "Request for Board Review." If you have any questions regarding these review procedures, you may contact the Legal Office, Department of Health and Environmental Control, 2600 Bull Street, Columbia, SC 29201 or by calling (803)-898-3350.

Upon completion of construction, a letter must be submitted to the Environmental Affairs (EA) Region office from the agricultural facility management plan preparer certifying that the construction has been completed in accordance with the approved plan. A final inspection may then be scheduled. The EA Region office will grant authorization to begin operation upon successful completion of the project.

In addition, Regulation 61-43 requires an operator of an animal facility or manure utilization area to attend CAMM training, created by Clemson University, on the operation of animal manure management systems. As the operator of this facility you are required to complete this training program within one year of the effective date of this permit, if you do not already have CAMM training certification. Please contact Bryan Smith with the Clemson Extension Service to inquire about future CAMM training classes for manure handling at (864) 984-2514.

If you have any questions regarding the permit, please contact William Chaplin at (803) 898-3532. Please note that this system cannot be placed into operation until final approval is granted by the appropriate Environmental Affairs (EA) Region office. Your region contact is Chrissy Matthews, 1736 S. Main Street, Greenwood, SC 29646, (864)-227-5915 or matthecs@dhec.sc.gov. The BEHS Region office should be notified when construction begins.

Sincerely,

Charles J. Williams, Manager
Groundwater Protection and Agricultural Permitting
Bureau of Water

CJW/WPC/el

cc: Chrissy Matthews, Upstate BEHS, Greenwood EA
Chris Mosley, P.E., Agri-Waste Technology, Inc, Apex, NC

dhec
Healthy People. Healthy Communities.

December 21, 2016

Concerned Citizen

RE: Jim Young Broilers, (Broiler Facility)

Dear Concerned Citizen:

The Department is sending this letter in response to your concerns in reference to the above-mentioned facility. After due consideration of the facts applicable to the above-named facility and the requirements and policies expressed in the Pollution Control Act of South Carolina and appropriate regulations, the Department of Health and Environmental Control has determined that the construction permit should be issued.

The concerns raised in the public meeting and the letters to the Department were carefully considered during this application review process. Concerns over odors, vectors, water quality, and dead animal disposal are concerns the Department's regulation address. The applicant's Comprehensive Nutrient Management Plan, prepared by Chris Mosley, PE, Agri-Waste Technology, Inc. has measures for controlling odors, vectors, and protecting groundwater. The permit will require the applicant to leave the 400 foot property line setback along Lisbon Road and the eastern property line vegetated as it currently exists. The Department has also included, with this letter, the answers to the questions asked during the public meeting.

This permit will be issued on December 21, 2016 and become effective January 5, 2017, provided that no request for board review is filed. Once the construction permit is issued, any person(s) can request a review of the issuance of that permit, as outlined in the "Guide for Board Review" enclosed with this mailing.

If you have any further questions regarding the review procedures, you may contact the Legal Office, Department of Health and Environmantal Control, 2600 Bull St., Columbia, SC 29201 or by calling (803) 898-3350. If you have any questions regarding the permit decision, please contact me at (803) 898-3532.

Sincerely,

William Chaplin

William Chaplin
SC DHEC - Bureau of Water
Agricultural Permitting Section

cc: Chrissy Matthews, Upstate BEHS Greenwood EA Office, SCDHEC
Jim Young, applicant
"Guide for Board Review" enclosure
Questions and Answers from public meeting enclosure

dhec
S.C. Department of Health and Environmental Control

BUREAU OF WATER
Agricultural Permit
ND0089354

Permission is hereby granted to:

Jim Young
107 Batteaux Place
Blythewood, SC 29016

for construction and operation of a **NO-DISCHARGE** agricultural manure and animal by-products treatment and storage system in accordance with the construction plans, specifications, engineering report, animal facility management plan and construction permit application prepared by Chris Mosley, P.E., Agri-Waste Technology, Inc.

COUNTY: Laurens

Project Description:
1. Construction of six (6) new poultry broiler houses.
2. Housed broilers raised on earthen floor - covered with wood shavings.
3. Contract disposal of the manure on 192.7 acres and with a permitted manure broker per plans and specifications.
4. Other conditions as stated in animal facility management plan.
5. Treat 1449 tons of manure generated as follows:

6 houses X 39,600 birds/house X 4.5 flocks/year	= 1,069,200 birds per year
237,600 broilers X 4.55 lbs. Av. Live Wt.	= 1,081,080 lbs normal live weight
237,600 broilers X 6.1 tons/year/1000 bird spaces	= 1449 tons/year waste production

Special Conditions: (See attachments).

Permit Number: 19,889-AG

Date of Issue: December 21, 2016 **Effective Date:** January 5, 2017.

Expiration Dates: Unless construction begins prior to January 3, 2019, and is completed prior to January 2, 2020, this permit will expire. In accepting this permit, the owner agrees to the admission of properly authorized persons at all reasonable hours for the purpose of sampling and inspection.

Treatment Plant Classification: Group 0

WRITTEN AUTHORIZATION TO PLACE THIS SYSTEM INTO OPERATION MUST BE OBTAINED FROM THE DEPARTMENT PRIOR TO PLACING ANIMALS IN THE FACILITY.

Charles J. Williams, Manager
Groundwater Protection and Agricultural Permitting

CJW/WPC/el

cc: Chrissy Matthews, Upstate BEHS, Greenwood, Environmental Affairs office
Chris Mosley, P.E., Agri-Waste Technology, Inc, Apex, NC

SPECIAL CONDITIONS
(Poultry)

1. Operate and maintain the waste system, including all special conditions in accordance with Waste Management Plan developed by Chris Mosley, P.E., Agri-Waste Technology, Inc. Operate and maintain this waste management system in accordance with State and Federal law so as to prevent discharges to the environment. Should this waste management plan fail to function as intended, additional control or treatment of the wastes may be required.

2. Disposal of daily mortality will be burial and emergency mortality will be burial in the approved DHEC burial sites, unless an alternate method is selected and approved by the Department. If a massive die-off occurs, notify your local inspector immediately, Chrissy Matthews at (864) 227-5915. If you are calling after-hours, please call the Department's twenty four hour number (888) 481-0125 or (803) 253-6488. If you plan to bury the dead animals from a massive die-off, a DHEC representative must approve the site prior to burial. The Department recommends that you develop an emergency plan for a massive die-off situation prior to the occurrence and submit this plan to your local inspector for approval. If a plan and/or site are pre-approved, then you would only be required to notify the Department of the massive die-off, and then implement the pre-approved plan for disposal.

3. If you have mortality on the farm that may be attributed to disease or toxin exposure, please contact Dr. Julie Helm of the State Veterinarian office at (803) 788-2260 for additional assistance in the handling and disposal of infected birds. The State Veterinarian office recommends that the diagnostic lab evaluate samples for deaths in excess of 1% of a house population. This action can help identify disease outbreaks on the farm. The State Veterinarian Office can also provide guidance in preventing the spread of diseases.

4. You are responsible for obtaining any other local permits that may be required for this project, including a building permit and **stormwater permit**. Please contact your local county offices to inquire about required permits.

5. Drinking water wells installed on this site to provide water for animal or human consumption must be installed with at least the following minimum setbacks required in regulation 61-71 (Well Standards & Regulations):

(a) Sewer lines	20 feet
(b) Lakes, streams, surface-water bodies	50 feet
(c) Septic tanks/tile fields	50 feet
(d) Animal feedlots, barns, stables	50 feet
(e) Waste disposal - land application sites	100 feet
(f) Waste treatment lagoons	100 feet
(g) Herbicide, pesticide & petroleum handling/storage sites	100 feet

A permit for private wells must be obtained from the Department prior to installation. Enclosed is a copy of the application for a well permit. If you have any questions on well permitting, please contact Well Permitting at (803) 898-4174.

SPECIAL CONDITIONS (continued)
(Poultry)

6. Annual reporting is required for this permit.
   An annual report is due by January 1st of each year (starting in 2018) and must include the following:

   (a) Waste sampling results for the last year, if applicable, and the latest rolling average.
   (b) Soil monitoring results, if applicable.
   (c) Groundwater monitoring results, if applicable.
   (d) Calculated application rates for all waste utilization areas, if applicable.
   (e) The adjusted application rates, if applicable, based on the most recent animal waste sampling and soil samples. The application rate change could also be due to a change in field use, crop grown or other factors.

   **Annual Reports should be sent to the following address:*
   SC Department of Health & Environmental Control
   Bureau of Water
   Compliance Assurance Division
   2600 Bull Street
   Columbia, SC 29201

7. **CAMM Certification is required within one year from the effective date of this permit.**

8. **The 400 foot property line setback along Lisbon Road and the property line on the eastern side of the parcel shall remain vegetated as it currently exists for as long as the facility is in operation.**

dhec
Healthy People. Healthy Communities.

December 21, 2016

Jim Young
107 Batteaux Place
Blythewood, SC 29016

RE: Permit No. 19,889-AG, Jim Young Broilers, ND0089354 - Laurens County

Dear Mr. Young,

Enclosed is a State Agricultural Permit for the above-referenced facility. Construction and operation is to be performed in accordance with this permit and the supporting agricultural facility management plan approved by this Office. Once the construction permit is issued, any person(s) can request a review of the issuance of that permit, as outlined in the enclosed document "Request for Board Review." If you have any questions regarding these review procedures, you may contact the Legal Office, Department of Health and Environmental Control, 2600 Bull Street, Columbia, SC 29201 or by calling (803)-898-3350.

Upon completion of construction, a letter must be submitted to the Environmental Affairs (EA) Region office from the agricultural facility management plan preparer certifying that the construction has been completed in accordance with the approved plan. A final inspection may then be scheduled. The EA Region office will grant authorization to begin operation upon successful completion of the project.

In addition; Regulation 61-43 requires an operator of an animal facility or manure utilization area to attend CAMM training, created by Clemson University, on the operation of animal manure management systems. As the operator of this facility you are required to complete this training program within one year of the effective date of this permit, if you do not already have CAMM training certification. Please contact Bryan Smith with the Clemson Extension Service to inquire about future CAMM training classes for manure handling at (864) 984-2514.

If you have any questions regarding the permit, please contact William Chaplin at (803) 898-3532. Please note that this system cannot be placed into operation until final approval is granted by the appropriate Environmental Affairs (EA) Region office. Your region contact is Chrissy Matthews, 1736 S. Main Street, Greenwood, SC 29646, (864)-227-5915 or matthecs@dhec.sc.gov. The BEHS Region office should be notified when construction begins.

Sincerely,

Charles J. Williams, Manager
Groundwater Protection and Agricultural Permitting
Bureau of Water

CJW/WPC/el

cc: Chrissy Matthews, Upstate BEHS, Greenwood EA Office
Chris Mosley, P.E., Agri-Waste Technology, Inc, Apex, NC

dhec
Healthy People. Healthy Communities.

November 30, 2016

Concerned Citizen

RE: Heath Coggins Broilers, (Broiler Facility)

Dear Concerned Citizen:

The Department is sending this letter in response to your concerns in reference to the above-mentioned facility. After due consideration of the facts applicable to the above-named facility and the requirements and policies expressed in the Pollution Control Act of South Carolina and appropriate regulations, the Department of Health and Environmental Control has determined that the construction permit should be issued.

The concerns raised in the public meeting and the letters to the Department were carefully considered during this application review process. Concerns over odors, vectors, water quality, and dead animal disposal are concerns the Department's regulation address. The applicant's Comprehensive Nutrient Management Plan, prepared by Chris Mosley, PE, Agri-Waste Technology, Inc. has measures for controlling odors, vectors, and protecting groundwater. The permit will require the applicant to leave the 400 foot property line setback along Lisbon Road vegetated as it currently exists. The Department has also included, with this letter, the answers to the questions asked during the public meeting.

This permit will be issued on November 30, 2016 and become effective December 15, 2016, provided that no request for board review is filed. Once the construction permit is issued, any person(s) can request a review of the issuance of that permit, as outlined in the "Guide for Board Review" enclosed with this mailing.

If you have any further questions regarding the review procedures, you may contact the Legal Office, Department of Health and Environmental Control, 2600 Bull St., Columbia, SC 29201 or by calling (803) 898-3350. If you have any questions regarding the permit decision, please contact me at (803) 898-3532.

Sincerely,

William Chaplin
SC DHEC - Bureau of Water
Agricultural Permitting Section

cc: Chrissy Matthews, Upstate BEHS Greenwood EA Office, SCDHEC
Heath Coggins, applicant
"Guide for Board Review" enclosure
Questions and Answers from public meeting enclosure

S.C. Department of Health and Environmental Control

BUREAU OF WATER
Agricultural Permit
ND0089362

Permission is hereby granted to:

Heath Coggins
113 Moreland Avenue
Laurens, SC 29360

for construction and operation of a **NO-DISCHARGE** agricultural manure and animal by-products treatment and storage system in accordance with the construction plans, specifications, engineering report, animal facility management plan and construction permit application prepared by Chris Mosley, P.E., Agri-Waste Technology, Inc.

COUNTY: Laurens

Project Description:
1. Construction of six (6) new poultry broiler houses.
2. Housed broilers raised on earthen floor - covered with wood shavings.
3. Contract disposal of the manure with a permitted manure broker per plans and specifications.
4. Other conditions as stated in animal facility management plan.
5. Treat 1449 tons of manure generated as follows:

6 houses X 39,600 birds/house X 4.5 flocks/year	= 1,069,200 birds per year
237,600 broilers X 4.55 lbs. Av. Live Wt.	= 1,081,080 lbs normal live weight
237,600 broilers X 6.1 tons/year/1000 bird spaces	= 1449 tons/year waste production

Special Conditions: (See attachments).

Permit Number: 19,876-AG

Date of Issue: November 30, 2016 **Effective Date:** December 15, 2016

Expiration Dates: Unless construction begins prior to December 13, 2018, and is completed prior to December 12, 2019, this permit will expire. In accepting this permit, the owner agrees to the admission of properly authorized persons at all reasonable hours for the purpose of sampling and inspection.

Treatment Plant Classification: Group 0

WRITTEN AUTHORIZATION TO PLACE THIS SYSTEM INTO OPERATION MUST BE OBTAINED FROM THE DEPARTMENT PRIOR TO PLACING ANIMALS IN THE FACILITY.

Charles Williams, Manager
Groundwater Protection and Agricultural Permitting

CJW/WPC/el

cc: Chrissy Matthews, Upstate BEHS, Greenwood, Environmental Affairs office
Chris Mosley, P.E., Agri-Waste Technology, Inc, Apex, NC

SPECIAL CONDITIONS
(Poultry)

1. Operate and maintain the waste system, including all special conditions in accordance with Waste Management Plan developed by Chris Mosley, P.E., Agri-Waste Technology, Inc. Operate and maintain this waste management system in accordance with State and Federal law so as to prevent discharges to the environment. Should this waste management plan fail to function as intended, additional control or treatment of the wastes may be required.

2. Disposal of daily mortality will be burial and emergency mortality will be burial in the approved DHEC burial sites, unless an alternate method is selected and approved by the Department. If a massive die-off occurs, notify your local inspector immediately, Chrissy Matthews at (864) 227-5915. If you are calling after-hours, please call the Department's twenty four hour number (888) 481-0125 or (803) 253-6488. If you plan to bury the dead animals from a massive die-off, a DHEC representative must approve the site prior to burial. The Department recommends that you develop an emergency plan for a massive die-off situation prior to the occurrence and submit this plan to your local inspector for approval. If a plan and/or site are pre-approved, then you would only be required to notify the Department of the massive die-off, and then implement the pre-approved plan for disposal.

3. If you have mortality on the farm that may be attributed to disease or toxin exposure, please contact Dr. Julie Helm of the State Veterinarian office at (803) 788-2260 for additional assistance in the handling and disposal of infected birds. The State Veterinarian office recommends that the diagnostic lab evaluate samples for deaths in excess of 1% of a house population. This action can help identify disease outbreaks on the farm. The State Veterinarian Office can also provide guidance in preventing the spread of diseases.

4. You are responsible for obtaining any other local permits that may be required for this project, including a building permit and **stormwater permit**. Please contact your local county offices to inquire about required permits.

5. Drinking water wells installed on this site to provide water for animal or human consumption must be installed with at least the following minimum setbacks required in regulation 61-71 (Well Standards & Regulations):

(a) Sewer lines	20 feet
(b) Lakes, streams, surface-water bodies	50 feet
(c) Septic tanks/tile fields	50 feet
(d) Animal feedlots, barns, stables	50 feet
(e) Waste disposal - land application sites	100 feet
(f) Waste treatment lagoons	100 feet
(g) Herbicide, pesticide & petroleum handling/storage sites	100 feet

A permit for private wells must be obtained from the Department prior to installation. Enclosed is a copy of the application for a well permit. If you have any questions on well permitting, please contact Well Permitting at (803) 898-4174.

SPECIAL CONDITIONS (continued)
(Poultry)

6. Annual reporting is required for this permit.
   An annual report is due by January 1st of each year (starting in 2018) and must include the following:

   (a) Waste sampling results for the last year, if applicable, and the latest rolling average.
   (b) Soil monitoring results, if applicable.
   (c) Groundwater monitoring results, if applicable.
   (d) Calculated application rates for all waste utilization areas, if applicable.
   (e) The adjusted application rates, if applicable, based on the most recent animal waste sampling and soil samples. The application rate change could also be due to a change in field use, crop grown or other factors.

   **Annual Reports should be sent to the following address:*
   SC Department of Health & Environmental Control
   Bureau of Water
   Compliance Assurance Division
   2600 Bull Street
   Columbia, SC 29201

7. **CAMM Certification is required within one year from the effective date of this permit.**

8. **The 400 foot property line setback along Lisbon Road shall remain vegetated as it currently exists for as long as the facility is in operation.**

dhec
Healthy People. Healthy Communities.

November 30, 2016

Heath Coggins
113 Moreland Avenue
Laurens, SC 29360

RE: Permit No. 19,876-AG, Heath Coggins Broilers, ND0089362 - Laurens County

Dear Mr. Coggins,

Enclosed is a State Agricultural Permit for the above-referenced facility. Construction and operation is to be performed in accordance with this permit and the supporting agricultural facility management plan approved by this Office. Once the construction permit is issued, any person(s) can request a review of the issuance of that permit, as outlined in the enclosed document "Request for Board Review." If you have any questions regarding these review procedures, you may contact the Legal Office, Department of Health and Environmental Control, 2600 Bull Street, Columbia, SC 29201 or by calling (803)-898-3350.

Upon completion of construction, a letter must be submitted to the Environmental Affairs (EA) Region office from the agricultural facility management plan preparer certifying that the construction has been completed in accordance with the approved plan. A final inspection may then be scheduled. The EA Region office will grant authorization to begin operation upon successful completion of the project.

In addition, Regulation 61-43 requires an operator of an animal facility or manure utilization area to attend CAMM training, created by Clemson University, on the operation of animal manure management systems. As the operator of this facility you are required to complete this training program within one year of the effective date of this permit, if you do not already have CAMM training certification. Please contact Bryan Smith with the Clemson Extension Service to inquire about future CAMM training classes for manure handling at (864) 984-2514.

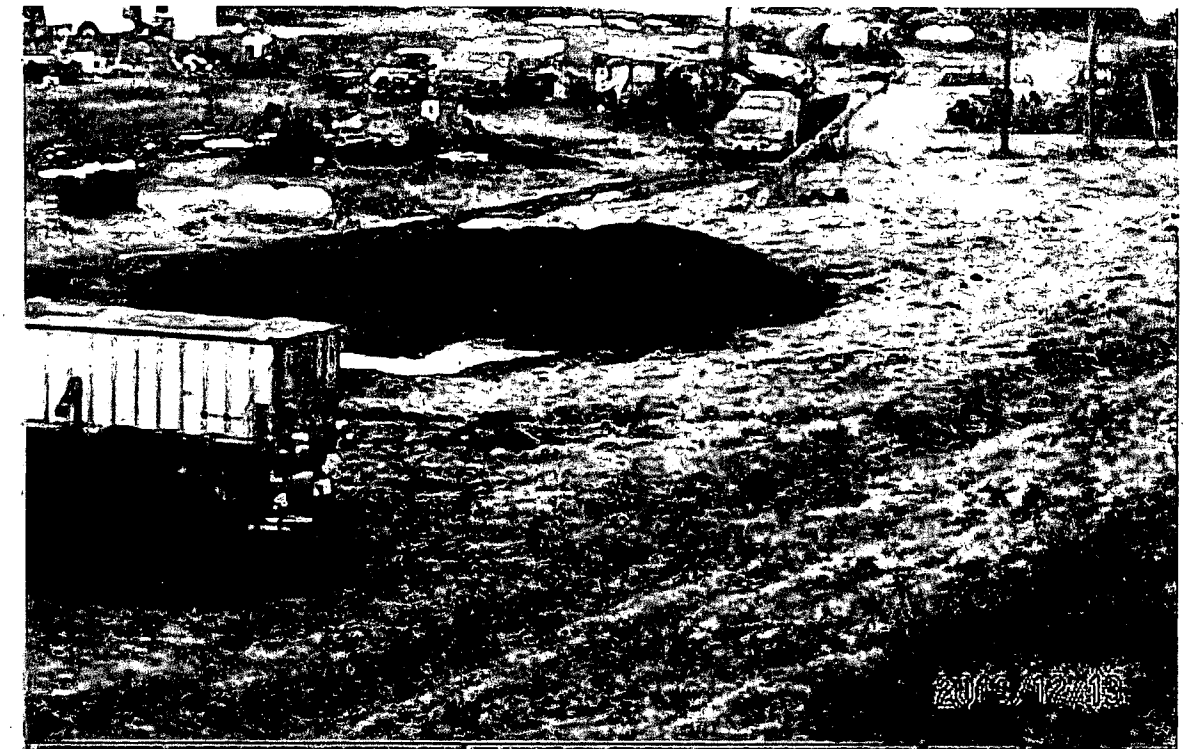
If you have any questions regarding the permit, please contact William Chaplin at (803) 898-3532. Please note that this system cannot be placed into operation until final approval is granted by the appropriate Environmental Affairs (EA) Region office. Your region contact is Chrissy Matthews, 1736 S. Main Street, Greenwood, SC 29646, (864)-227-5915 or matthecs@dhec.sc.gov. The BEHS Region office should be notified when construction begins.

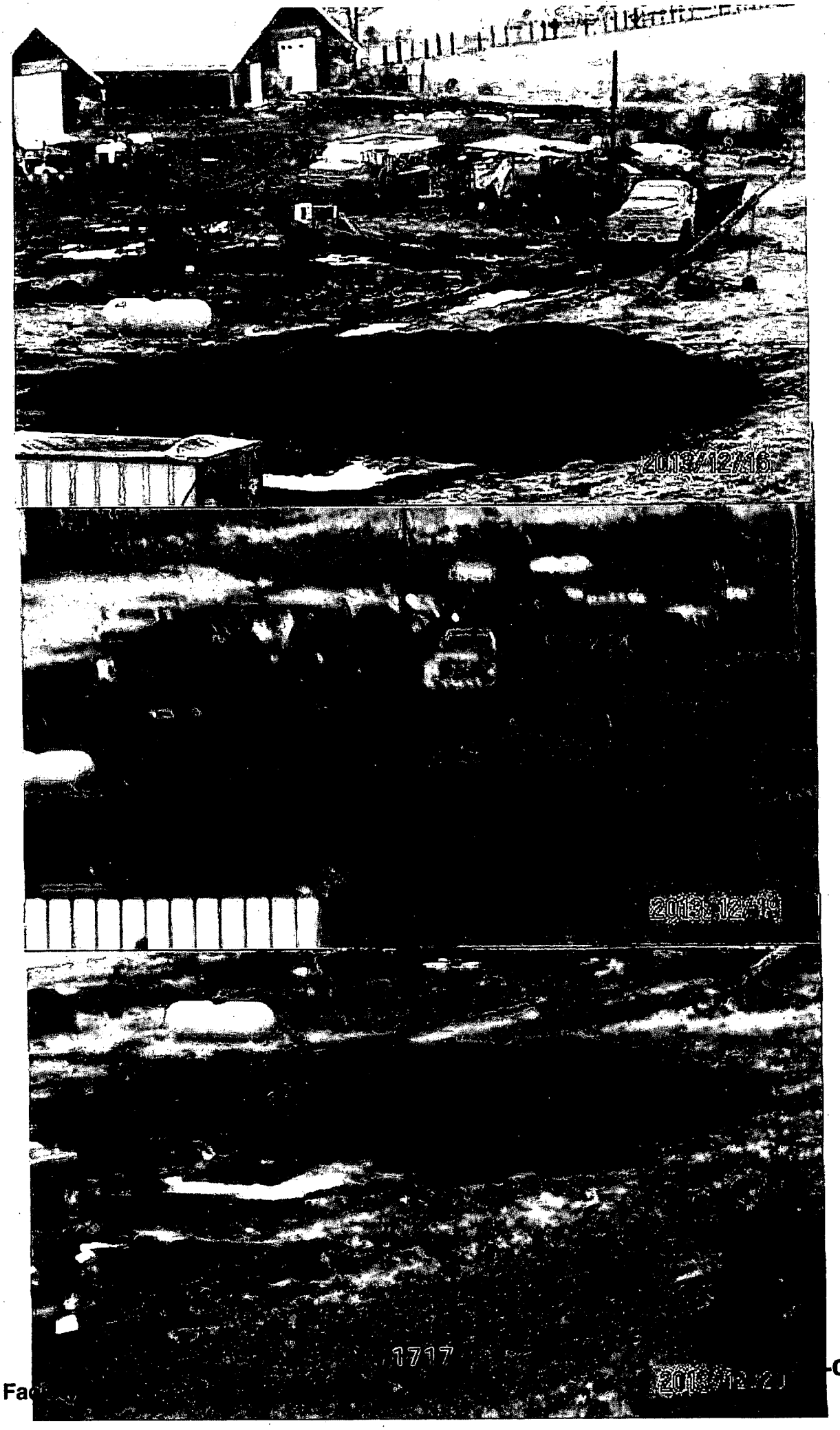
Sincerely,

Charles Williams, Manager
Groundwater Protection and Agricultural Permitting
Bureau of Water

CJW/WPC/el

cc: Chrissy Matthews, Upstate BEHS, Greenwood EA, Upstate Region
Chris Mosley, P.E., Agri-Waste Technology, Inc, Apex, NC

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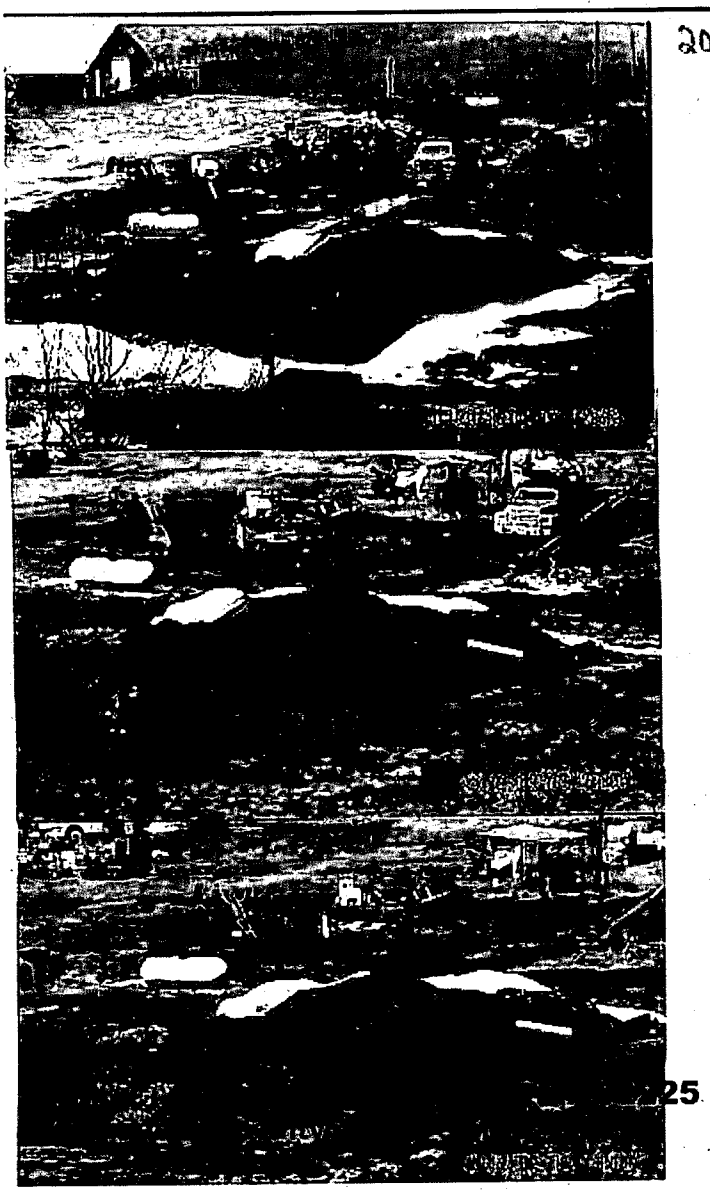

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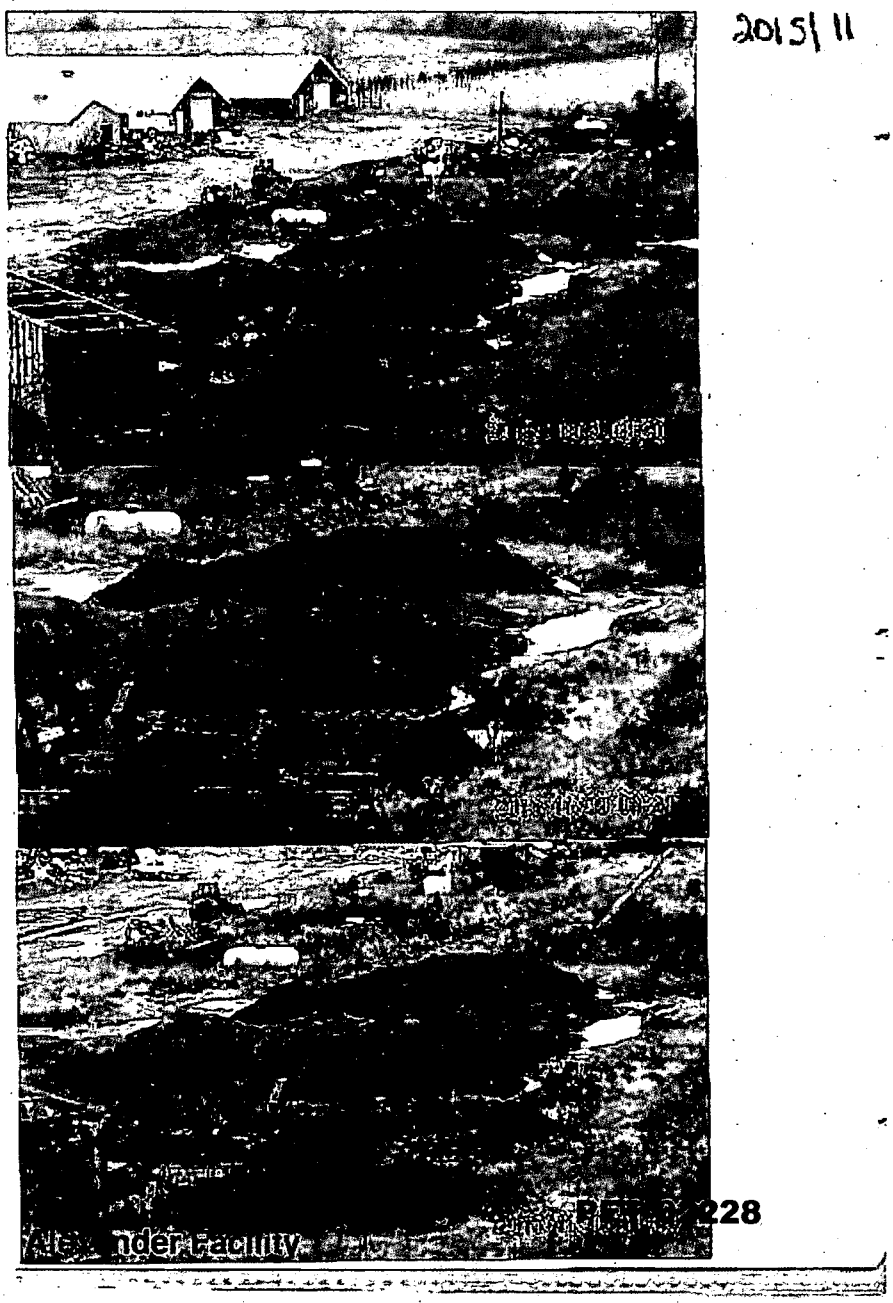

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STATE OF SOUTH CAROLINA
ADMINISTRATIVE LAW COURT

Charles S. Blackmon and South Carolinians for Responsible Agricultural Practices, Petitioners, vs. South Carolina Department of Health and Environmental Control and Jim Young Broilers, Respondents.	)	DOCKET NO. 17-ALJ-07-0039-CC **RESPONDENT SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL'S RESPONSE COURT'S INQUIRY**

The Respondent South Carolina Department of Health and Environmental Control ("Department") submits the following in reply to the Court's request that the Department submit responses to three questions regarding the Department's interpretation of the regulations governing Confined Animal Feed Operations ("CAFO(s)"), 3 S.C. Code Ann. Regs 61-9.122.23 (2011) and Standards for the Permitting of Agricultural Facilities (other than swine) 4 S.C. Code Ann. Regs 61-43 Part 200 (2011):

1. **In light of the following Regulations – 61-9.122.21(a)(1), 61-9.122.23(a), 61-9.122.23(d) and 61-9.122.23(f) – does DHEC automatically exclude CAFO's from the requirement for a NPDES permit if it grants a (no-discharge) permit under Reg. 61-43 Part 200?**

Pursuant to 3 S.C. Code Ann. Regs. 61-9.122.23(c), the Department does not designate any Animal Feeding Operation ("AFO"), which is defined in 3 S.C. Code Ann. Regs 61-43 61-9.122.23.(b)(1), as a CAFO because the Department does not allow any AFO to contribute pollutants to the Waters of the State ("WOS"). With regard to AFOs growing animals other swine, the Department permits the construction and operation of AFOs under 4 S.C. Code Ann. Regs. 61-43 Part 200. These permits prohibit the discharge of pollutants from the operation of the facility

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into waters of the State. 4 S.C. Code Ann. Regs. 61-43 Part 200.20 ("Permits issued under this regulation are no-discharge permits.") and Part 200.140(A) ("There shall be **no discharge of pollutants from the operation into surface waters of the State** (including ephemeral and intermittent streams). There shall be **no discharge of pollutants into groundwater**, which could cause groundwater quality not to comply with the groundwater standards established in South Carolina Regulation 61-68.") (emphasis added). Accordingly, any AFO that discharges into waters of the State is considered in violation of their permit and subject to enforcement.

If an AFO was considered a CAFO by the Department and issued a National Pollutant Discharge Elimination Permit (NPDES) under 4 S.C. Code Ann. Regs 61-9.122.23, the NPDES permit would authorize the AFO to discharge to WOS.

2. If the permit application process under Regulation 61-43 Part 200 does meet the exception provided in subsection (d)(2) of Regulation 61-9.122.23, how does the Department interpret the notification language in (d)(2) that: "once the owner or operator has received from the Department notification of a determination under paragraph (f) of this section that the CAFO has "no potential to discharge" manure, litter, or process wastewater"?

The permitting process set forth in 4 S.C. Code Ann. Regs. 61-43 Part 200, mandates that the Department determine, among other matters, whether the new or expanded AFO will discharge to the Waters of the State ("WOS"). When the Department issues a notification of the determination to issue a permit under 4 S.C. Code Ann. Regs. 61-43 Part 200 to the applicant and affected persons, requesting notification in writing, constitutes the Department's determination of that the operation of the facility will not allow the discharge of pollutants into WOS. Accordingly, the Department's determination to issue an agricultural permit under 3 S.C. Code Regs. 61-43 Part 200 also constitutes a determination under 4 S.C. Code Ann. Regs. 61-9.122.23 (d)(2) that the AFO has no potential to discharge to WOS, since permits issued pursuant to 4 S.C. Code Ann. Regs. 61-43 Part 200 do not allow any AFOs to contribute pollutants to WOS.

3. **Did the applicant provide all of the information specified in sections 122.21(f) and (i)(1)(i) through (ix) as required by 122.23 (f)(2)?**

The permitting of poultry facilities is governed by the Standards for the Permitting of Agricultural Facilities (other than swine). 4 S.C. Code Ann. Regs 61-43 Part 200.10(A). The information required for the review applications for new or expanded no discharge facilities is set forth in detail in 4 S.C. Code Ann. Regs 61-43 Part 200.50. This information provides the Department with substantially similar information required by 3 S.C. Code Ann. Regs. 61-9.122.21(f) and (i)(1)(i) – (ix) for the Department to consider in making the determination that a facility will not be a potential discharger under 3 S.C. Code Ann. Regs. 61-9.122.23(f)(2).

The applicants provided an administratively complete application that contained all applicable information and, in response to Staff requests during the review process, they clarified and/or supplemented the information contained in the applications. The information was reviewed by Staff and the Department determined that applications should be granted and Regulations 61-43 no-discharge permits were issued to the applicants. Implicit in the issuance of these permits is the Department's determination that these facilities pose no potential to discharge.

Respectfully submitted,

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South Carolina Department of Health
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November 3, 2017
Columbia, South Carolina

THE STATE OF SOUTH CAROLINA
IN THE COURT OF APPEALS

APPEAL FROM THE ADMINISTRATIVE LAW COURT

The Honorable Ralph King Anderson, III
Administrative Law Judge

Case No. 2017-002598

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SC Court of Appeals

CHARLES S. BLACKMON AND SOUTH CAROLINIANS FOR RESPONSIBLE AGRICULTURAL PRACTICES, ... APPELLANTS,

v.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL, AND DAVID COGGINS BROILERS, ... RESPONDENTS,

CHARLES S. BLACKMON AND SOUTH CAROLINIANS FOR RESPONSIBLE AGRICULTURAL PRACTICES, ... APPELLANTS,

v.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL, AND HEATH COGGINS BROILERS, ... RESPONDENTS,

CHARLES S. BLACKMON AND SOUTH CAROLINIANS FOR RESPONSIBLE AGRICULTURAL PRACTICES, ... APPELLANTS,

v.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL, AND JIM YOUNG BROILERS, ... RESPONDENTS.

CERTIFICATE OF APPELLANT

The undersigned hereby certifies that the Record on Appeal contains all material proposed to be included by any of the parties and not any other material.

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1230 Richland Street
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Attorney for Appellants

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