



North Carolina Department of Environment and Natural Resources

Division of Waste Management

Pat McCrory
Governor

Dexter R. Matthews
Director

John E. Skvarla, III
Secretary

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WASTE MANAGEMENT
SOLID WASTE SECTION

**PERMIT TO OPERATE A SEPTAGE LAND
APPLICATION SITE**

Coastal Farms and Residuals, LLC
Wesley Wooten
8155 Malpass Corner Rd.
Currie, NC 28435

is hereby permitted to operate Septage Land and Application Site with permit # **SLAS-71-11** located on SR 1516 in Pender County at approximate position 34.46304° N latitude and -77.85484° W longitude. This site is permitted only for operations that are conducted in accordance with the representations made in the approved application, with all conditions attached to this permit, and with all of the provisions of 15A NCAC 13B.0800 -- Septage Management. Failure to operate as permitted may result in the Department suspending or revoking this permit, initiating action to enjoin the unpermitted operation, imposing administrative penalties, or invoking any other remedy as provided in Chapter 130A, Article 1, Part 2 of the North Carolina General Statutes.

This permit shall be reviewed annually to determine if soil test results and management activities are in compliance with the Septage Management Rules and the conditions of this permit. Modifications, where necessary, shall be made in accordance with rules in effect at the time of review.

Date Issued 6/26/2013


Martin A. Gallagher, Branch Head
Composting & Land Application Branch

1646 Mail Service Center, Raleigh, North Carolina 27699-1646
Telephone 919-707-8200 \ Internet <http://portal.ncdenr.org/web/wm/sw>

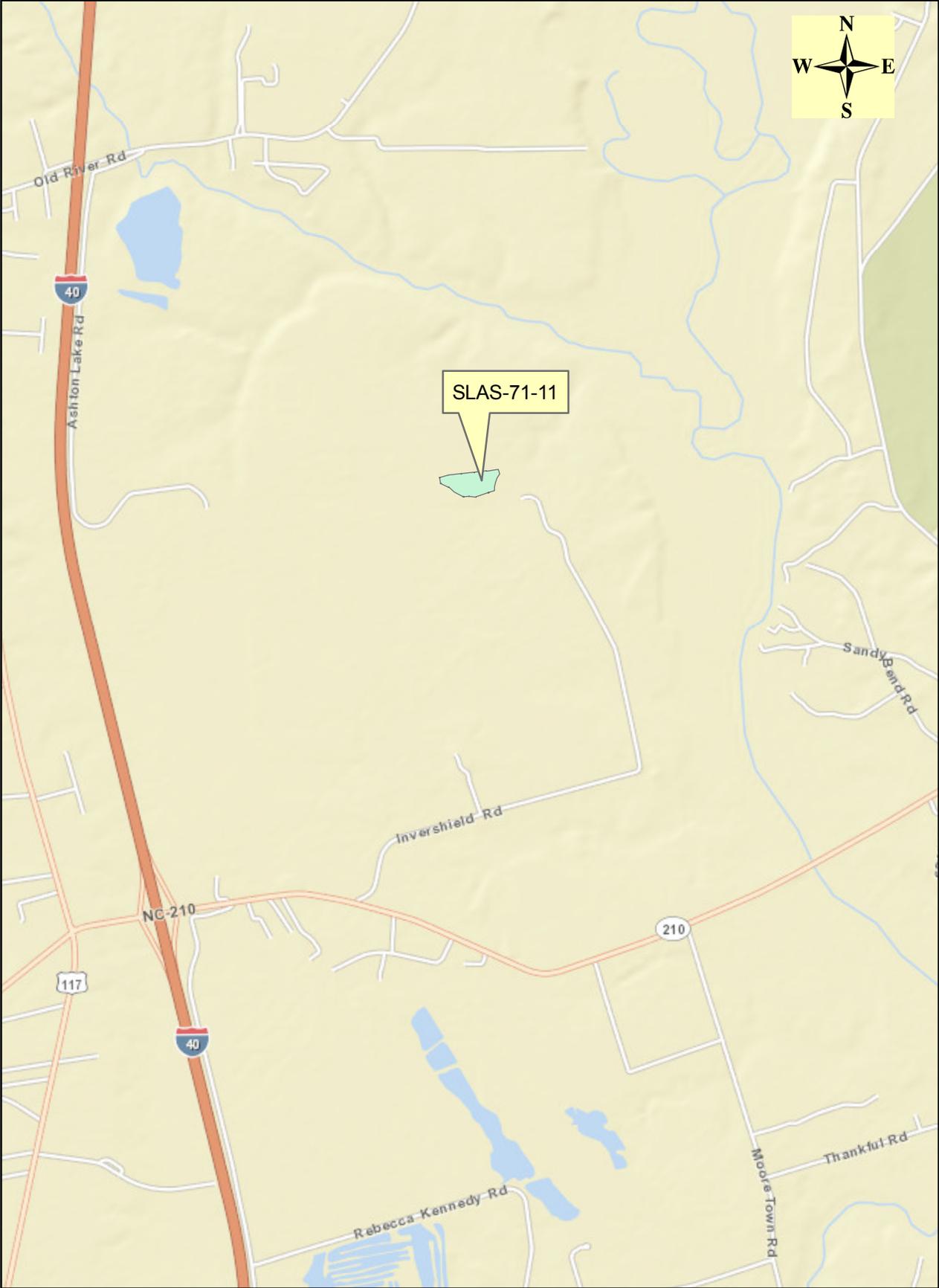
CONDITIONS OF OPERATING PERMIT

1. This permit shall become void if the soils fail to adequately assimilate the septage and shall be rescinded unless the site is maintained and operated in a manner which will protect the assigned water quality standards of both surface and ground waters.
2. This site shall be operated and maintained in accordance with the nutrient management plan submitted by Wesley Wooten and approved by the Division of Waste Management. This site consists of one field, P1, with 8.8 acres. The field shall be planted in row crops such as cereal rye, corn, wheat, and soybeans within an alternating two year rotation. The rye or wheat shall be planted by mid-October (early November at the latest) at a rate of 2.5 to 3 bu/ac or at rates recommended by the NC Cooperative Extension Service. The rye will be harvested as hay, preferably by late April to early-May. The wheat will be harvested as grain by June. The corn and soybeans will be planted as soon as possible after the preceding crop is removed, and they will be harvested as grain in the fall. Corn will be planted at approximately 30 lbs/ac and soybeans at 70 lbs/ac. The 30-day waiting period between the last application of septage and the harvest of a crop shall be met by alternating septage applications between other permitted sites. All discharges shall be at locations on the site consistent with the crop rotation in the approved plan.
3. This site shall be operated and maintained in accordance with the erosion and runoff control plan submitted by Wesley Wooten in such a manner as to prevent the migration of wastes off of the designated waste receiving site. A vegetative buffer shall be maintained around the perimeter of the permitted area. Septage shall not be applied within the buffer areas. Any site improvements noted in the plan must be installed within 30 days of plan approval. The installation of groundwater monitoring wells shall be required as deemed necessary by the Division.
4. The issuance of this permit does not preclude the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other local, state, and federal government agencies which have jurisdiction. It is the responsibility of the Permittee to be in compliance with the Federal Regulations listed in the Code of Federal Regulations, 40 CFR Part 503.
5. This permit may be modified or reissued at any time to incorporate any conditions, limitations, and / or monitoring requirements the Division deems necessary to adequately protect the environment and public health.

6. **This site is only permitted for the land application of domestic septage, grease trap pumpings, and portable toilet waste.** Domestic septage pH shall be raised to 12 or higher by alkali addition and, without the addition of additional alkali, shall remain at 12 or higher for 30 minutes prior to land application. Grease septage or grease septage mixed with domestic septage shall be raised to a pH of 12 or higher by alkali addition and, without the addition of additional alkali, shall remain at 12 or higher for 2 hours prior to land application.
7. **This site contains approximately 8.8 acres that are available for land application of septage.** The maximum annual application rate shall be 50,000 gallons per acre per year, for a total, maximum annual application of 440,000 gallons. This application rate assumes equal septage distribution, on an annual basis, over the entire permitted area. Application amounts to the fields shall not exceed the maximum annual application rate or the monthly rates as listed in the approved nutrient management plan for the site.
8. An approved above ground septage detention system with a minimum design capacity of 9,000 gallons shall be available prior to operation of this site unless an approved wastewater treatment plant is available for use during periods of adverse weather. The storage capacity may be adjusted if it is demonstrated during the operation of the site that this volume of storage is inappropriate.
9. Only the area designated on the attached site map(s) shall be utilized for septage disposal. Each load of septage discharged at the site shall be distributed from a moving vehicle in such a manner that there is no standing water when the discharge is complete.
10. Septage shall not be applied during any precipitation event, or if there is standing water on the soil surface, if the soil surface is frozen, or if the soil surface is snow covered. The Permittee shall consider pending weather conditions when making the decision to land apply in order to prevent any discharge of septage outside of the permitted boundary.
11. Septage shall not be applied during periods of high soil moisture. Septage applications that will result in ruts greater than three inches in the soil surface are prohibited.
12. Any discharge of septage outside of the permitted boundaries via runoff, aerial drift, etc. is prohibited.
13. This permit shall become voidable unless the land application activities are carried out in accordance with the conditions of this permit and in the manner approved by this Division. No one other than the Permittee or an employee of the firm named in this permit shall discharge septage at this site without prior appropriate notification and written approval from the Division.

14. Prior to any transfer of this land, a notice shall be given to the new owner that gives full details of the materials applied or incorporated at this site. The Division shall be notified prior to site closure. This permit is non-transferable.
15. **This permit shall expire on June 26, 2014.** Modifications, when necessary, shall be made in accordance with the rules in effect at the time of renewal. An application for permit renewal shall be submitted at least ninety (90) days prior to the permit renewal date. A septage application log for the period of time this permit was valid shall be submitted along with an application for permit renewal or modification. The information required in the log is described in Rule 15A NCAC 13B .0838 (e) (1) of the NC Septage Management Rules and the Code of Federal Regulations, 40 CFR Part 503.17 (b).
16. Records shall be kept in accordance with 40 CFR 503.17(b). These records shall be made available to a representative of the Division upon request.
17. Any duly authorized officer, employee, or representative of the Division may, upon presentation of credentials, enter and inspect any property, premises, or place on or related to the disposal site and facility at any reasonable time for the purpose of determining compliance with this permit; may inspect or copy any records that must be kept under the conditions of this permit; or may obtain samples of groundwater, surface water, or leachate.
18. Field separations in the nutrient management plan and all pertinent setbacks shall be clearly located on the site. Boundaries of the permitted septage land application fields shall be clearly marked on the ground.
19. The areas that can be used for land application of septage shall be maintained at least 500 feet from any existing wells, residences, places of business, or places of public assembly. Septage shall not be disposed of within 50 feet of any property line or within 100 feet of any ditch.
20. **Nutrient additions to the established crop shall not exceed the recommendations listed on the annual soil test report with the exception of nitrogen. Nitrogen additions to the crop from septage and commercial fertilizers shall not exceed the nitrogen amount listed in the approved nutrient management plan. The annual amounts of all nutrients applied must be recorded for each crop on a pound per acre basis and made available to the Division upon request.**

SLAS-71-11



Site located off of Invershield Rd. (SR 1516) in Pender County at 34.46304° N and -77.85484° W. Basemap provided by ESRI, Inc.

SLAS-71-11



Source: Bing Maps aerial imagery, ESRI, (c) 2010 Microsoft Corporation and its data suppliers; site boundary, NC DENR Division of Waste Management. Map created by NC DENR Division of Waste Management, Compost and Land Application Branch for permitting purposes only.



North Carolina Department of Environment and Natural Resources
Division of Waste Management

Pat McCrory
Governor

Dexter R. Matthews
Director

John E. Skvarla, III
Secretary

June 27, 2013

Mr. Wesley Wooten
Coastal Farms and Residuals, LLC
8155 Malpass Corner Rd.
Currie, NC 28435

**RE: Issuance of Permit SLAS-71-11
Coastal Farms and Residuals, LLC
SR 1516 in Pender County**

Dear Mr. Wooten:

The NC Division of Waste Management has reviewed your application for a permit to operate a Septage Land Application Site in Pender County. Your application has been approved in accordance with NC Septage Management Rules and your permit, **SLAS-71-11**, is enclosed. Please read all permit conditions carefully. The nutrient management and soil erosion and runoff control plans you submitted have been incorporated into your permit. In particular, pay close attention to **Permit Conditions 2, 6, 7, 10, 11, 12, 15, and 20**. The following is a summation of those Conditions.

- **Condition 2.** This condition lists the acres of the fields and incorporates crop management details listed in the submitted nutrient management plan.
- **Condition 6.** States that this site is only permitted to receive domestic septage, grease trap pumpings, and portable toilet waste. Disposal of any other type of waste at this site is prohibited.
- **Condition 7.** States that there are approximately 8.8 acres available at this site for the land application of septage. **The maximum annual application rate for this site is 50,000 gallons per acre per year for a total, maximum annual application of 440,000 gallons.** The rates listed in the permit along with the monthly rates stated in the nutrient management plan are not to be exceeded.

CONTINUE ON BACK

- **Condition 10.** Septage shall only be applied when soil and weather conditions are favorable for application.
- **Condition 11.** Soil conditions must be monitored such that any septage application will not result in ruts greater than three inches in the soil surface.
- **Condition 12.** Any discharge, including aerial drift, of septage outside of the permitted boundaries is prohibited.
- **Condition 15. This permit is set to expire on June 26, 2014.** Ninety (90) days prior to the expiration of your permit, you must submit an application for permit renewal along with your septage land application logs for the entire time your current permit was valid.
- **Condition 20.** With the exception of nitrogen, nutrient additions to the crops being grown shall not exceed the recommendations as noted on the annual soil test report. Any nitrogen added from commercial fertilizer must not exceed the amount stated in the nutrient management plan minus the nitrogen that has and will be applied through septage applications.

Again, please pay close attention to all of the conditions within the enclosed permit. Remember that violations to the NC Septage Management Rules or this permit could subject you to administrative penalties of up to \$15,000 per violation per day. If you have any questions concerning your permits or septage in general, please do not hesitate to contact me at (919) 707-8283. When communicating to the Division about this permit, please refer to it as "**SLAS-71-11**"

Sincerely,



Chester R. Cobb, Soil Scientist
Composting & Land Application Branch

Enclosures

cc: Central Office
H. Allen Wooten and Wesley A. Wooten, Landowners
Pender County Health Department

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November 27, 2012

Division of Waste Management
1646 Mail Service Center
Raleigh, North Carolina 27699-1646



Attention: Chester Cobb, L.S.S.

Reference: APPLICATION FOR A PERMIT TO OPERATE A SEPTAGE LAND APPLICATION SITE

Coastal Farms and Residuals, LLC.
S&ME, Inc. Project No. 1588-09-034 Phase: 06

Mr. Cobb:

S&ME, Inc. (S&ME) is submitting all necessary requirements as specified in the N.C. Septage Management Rules on behalf of Coastal Farms and Residuals, LLC. (Coastal Farms) for a new septage permit on land owned by Mr. H. Allen Wooten and Mr. Wesley A. Wooten. S&ME compiled this application using data gathered by Coastal Farms and S&ME. This data includes: 1) application form, 2) landowner's authorization, 3) soil and agronomic evaluation, 4) detailed site mapping, and 5) septage nutrient management plan.

Coastal Farms estimates that the proposed maximum application rate 50,000 gallons/year will be comprised of 40% domestic waste, 20% portable toilet waste, and 40% grease trap waste. However, as we discussed during our previous phone conversations, these numbers are estimates. Grease trap waste will be diluted at a minimum ratio of 1:1 with domestic waste and/or portable toilet waste prior to land application.

Please contact S&ME at your convenience, in order to set up a time and date for the required field review of the site. If there is any further information required or questions regarding this application please do not hesitate to contact S&ME for further assistance.

Sincerely,

S&ME, Inc.


Martin Mabe
Project Manager/Agronomist


Rob Willcox, L.S.S.
Natural Resources Services Leader

Enclosures

S:\1588\REPORTS\1588\LewisFarms\2012 Septage Permitting\H. Allen Wooten\Cover Letter - Plantation Field.doc

APPLICATION FOR A PERMIT TO OPERATE A SEPTAGE LAND APPLICATION SITE

North Carolina Department of Environment and Natural Resources
Division of Waste Management – Solid Waste Section
1646 Mail Service Center, Raleigh, NC 27699-1646

I. Site and Operator Information

1. Applicant Coastal Farms and Residuals, LLC
Address 8155 Malpass Corner Road
Currie, NC 28435
Phone (910) 283-9823

2. Contact person for site operation (if different from applicant): Wesley Wooten
Title or position Secretary Phone (910) 283-9823
Address 8155 Malpass Corner Road
Currie, NC 28435

3. Landowner H. Allen Wooten and Wesley A. Wooten
Address 8155 Malpass Corner Road
Currie, NC 28435

4. Site Location: County Pender State Road Number SR 810
Directions to site: Site is located approximately 2 miles north of the intersection
of SR 810 (Invershield Rd.) and NC Highway 210

5. Indicate whether request is: new renewal modification

For a permit renewal or modification, provide the following information:

Existing site permit number: _____ permit expiration date: _____

6. Number of acres meeting the requirements of the N.C. Septage Management Rules: 12.1 acres.

7. Substances other than septage or grease trap pumpings previously disposed of on the site:
(a) None , or (b) Attach a list indicating other substances, the amounts discharged, and the dates of discharge.

8. Attach written, notarized landowner authorization to operate a septage disposal site signed by the landowner (if the permit applicant does not own the property). ***If a corporation owns the land use a corporate landowner authorization form. If limited liability company owns the land, use a limited liability company landowner authorization form.***

9. Attach site evaluation report, including aerial photograph and soil analysis with metals results, unless the Division prepared the report.

10. Attach a vicinity map (county road map showing site location).

(over)

II. Site Management Information:

The following information shall be included with the application form:

1. Nutrient Management Plan
2. Soil Erosion and Runoff Control Plan
3. Alternative plan for disposal (detention facility permit number or wastewater treatment plant authorization): Detention Facility Permit SDTF-71-08

4. Types of septage proposed to be discharged at the site (check all that apply):
 - (a) Domestic septage pumped from septic tanks X
 - (b) Grease trap pumpings X
 - (c) Portable toilet waste X
 - (d) Commercial / Industrial septage _____
5. Proposed treatment method of each type of septage to be land applied (use additional paper to explain if necessary): Hydrated lime will be added to domestic septage raising the pH to 12 or higher for 30 min. prior to land application. Septage containing grease trap pumping or any mixture of grease trap pumping will be raised to a pH of 12 or higher for 2 hr. prior to land application.

6. Proposed method of applying septage to land, including septage distribution plan if required * (use additional paper to explain if necessary): Septage will be applied evenly across the fields with no ponding or surface disturbance by utilizing a Pumper truck with a splash plate.

7. Demonstration from the appropriate state or federal government agency that the land application site complies with the Endangered Species Law ** or if any part of the site specified is not agricultural land (use additional paper to explain if necessary): Not Applicable – Agricultural Land

III. Certification

I hereby certify that:

1. The information provided on this application is true, complete, and correct to the best of my knowledge.
2. I have read and understand the N.C. Septage Management Rules, and
3. I am aware of the potential consequences, including penalties and permit revocation, for failing to follow all applicable rules and the conditions of a Septage Land Application Site permit.

Wesley Wooten
Signature***

Nov. 29, 2012
Date

Wesley Wooten
Print name

Secretary
Title

Note: This application will not be reviewed until all parts of the application are complete.

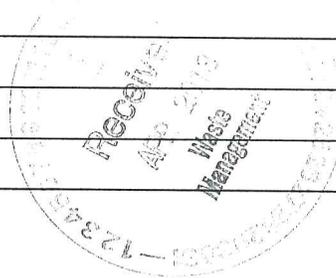
* Refer to Section .0837(e) of the N.C. Septage Management Rules.

** Refer to Section .0837(g) of the N.C. Septage Management Rules.

***Signature of company official required.

APPLICATION FOR A PERMIT TO OPERATE A SEPTAGE MANAGEMENT FACILITY (NON-PUMPER - \$200 FEE PER FACILITY)

DIVISION OF WASTE MANAGEMENT - SOLID WASTE SECTION 1646 MAIL SERVICE CENTER, RALEIGH, NC 27699-1649



(1.) Facility name: Coastal Farms and Residuals, LLC
Street address of office 8155 Malpass Corner Road
Currie, NC 28435
Mailing address (if different) Same as above
County Pender

(2.) Facility owner's name H. Allen Wooten & Wesley Wooten
Mailing address 8155 Malpass Corner Road, Currie, NC 28435
Phone: 910-283-5444 Email: wesley@lewisfarmsandliquidwaste.com

(3.) Facility operator's name Wesley Wooten Facility operator's title member-manager
Mailing address 8155 Malpass Corner Road
Currie, NC 28435
Phone 910-283-5444 Email: wesley@lewisfarmsandliquidwaste.com

(4.) Type(s) of septage managed:
Domestic X Portable Toilet Waste X Grease (restaurant) X
Treatment Plant Industrial/Commercial

(5) Facility Types: Check all that are applicable and provide the permit numbers.
a) Septage land application site Application for new site
b) Boat pump-out storage
c) Septage storage tanks
d) Septage treatment
e) Grease treatment

PALD
CK #1086 \$200.00

(6) Name and Permit Number of all permitted Septage Management Firms using facility :
(1) Lewis Farms and Liquid Waste, Inc.
(2)
(3)

(Use additional sheets if necessary)

Certification Statement

I certify that the information and representations in this application for a permit are true, complete, and accurate to the best of my knowledge and belief. I am aware that a permit may be suspended or revoked upon a finding that its issuance was based upon incorrect or inadequate information that materially affected the decision to issue the permit and that there are criminal penalties for knowingly making a false statement, representation, or certification.

Signature*
Wesley Wooten
Print Name

Date
3/20/13
Member - Manager
Title

*Signature of company official required.

Landowner's Authorization to Operate a Septage Land Application Site

North Carolina Department of Environment and Natural Resources
Division of Waste Management - Solid Waste Section
1646 Mail Service Center, Raleigh, NC 27699-1646

I, H. Allen Wooten (name of site owner) hereby certify that I am the owner of 94.5 acres of land located Rocky Point Township, Pender County and identified by Book 4134 Page 0325 (book and page of recorded deed or tax map parcel) and that I agree to allow Coastal Farms + Residuals LLC (name of site operator) to use said land for septage land application for a period of 99 years (length of time), beginning Nov. 25, 2012 (month, day and year) and that I have read the North Carolina Septage Management Rules *, and I understand and agree to maintain the restrictions on land use after septage land application ends **. I further understand that no septage may be land applied until the Division of Waste Management has issued a permit for a septage land application site. The above described property is owned solely by me or jointly with Wesley Allen Wooten (names of all co-owners, or state none).

Signature of landowner H. Allen Wooten Date 11-29-12

Signature of landowner Wesley Allen Wooten Date 11-29-12

Sworn to and subscribed before me this 29 day of NOV, 20 12.

[Signature]
(Notary Public)

My Commission expires: 9-13-13

* 15A N.C. Admin. Code 13B Section .0800

** As required by Rule .0843



Coastal Farms And Residuals, LLC.

H. ALLEN WOOTEN and WESLEY A. WOOTEN FARM

SOILS AND AGRONOMIC EVALUATION

The H. Allen Wooten and Wesley A. Wooten (Plantation) farm is located off of Invershield Road (SR 810) in Pender County, N.C. Field P1 is located west of Invershield Road approximately 2 miles north of the intersection of NC Highway 210 and Invershield Road. The surrounding area is primarily agricultural and forested.

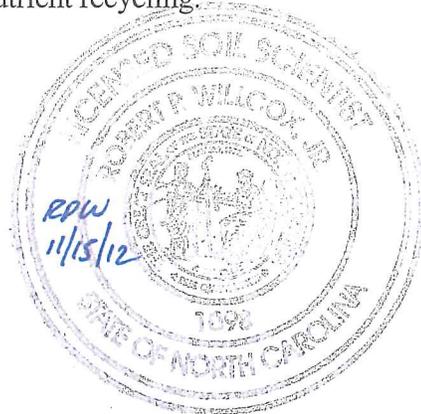
Field P1 is currently in a row crop rotation consisting of corn, soybean, and wheat. The topography over the field ranges from 0 to 2 %. Buffer requirements as required by 15A NCAC 13B .0800 for setbacks will need to be adhered to and will reduce the useable acreage in these fields. Refer to "Buffer Maps" for specific buffer/setback requirements and acreage totals.

A field investigation was conducted by an S&ME agronomist and soil scientist on September 12, 2012. Preliminary soils information for this site was obtained from the Pender County Natural Resources Conservation Service and Web Soil Survey. An S&ME soil scientist advanced hand auger boring on each field to characterize the proposed application site (hand auger boring location(s) are indicated on Figure 3 – NRCS Soil Series Map). Soil profile descriptions were performed on each proposed fields and indicated each field as suitable according to the criteria outlined in 15A NCAC 13B .0837(a)(4-6). The predominant soil series associated with Field P1 is most similar to the Autryville series (Loamy, siliceous, subactive, thermic Arenic Paleudults) and Gritney series (Fine, mixed, semiactive, thermic Aquic Hapludults). Soil Profile description sheets are contained within this section of the application indicating the predominant soil series identified on each field.

Both the soils and the crops should be able to assimilate the proposed loadings of liquids, solids, nitrogen, phosphorus, heavy metals, and salts known to be in the septage. This assessment is based on the residual analysis provided, the planned application rate, proper crop management guidelines and adherence to permit requirements. Soil pH for mineral soils should be maintained above 6.0 and at levels to ensure optimal crop production. Soil tests should be reviewed annually to identify any changes in the nutrient status of the soil. Management practices should be evaluated prior to each application to account for changes in the proposed hay cutting and land use objectives. Crop management guidelines that will be of importance for this site will be:

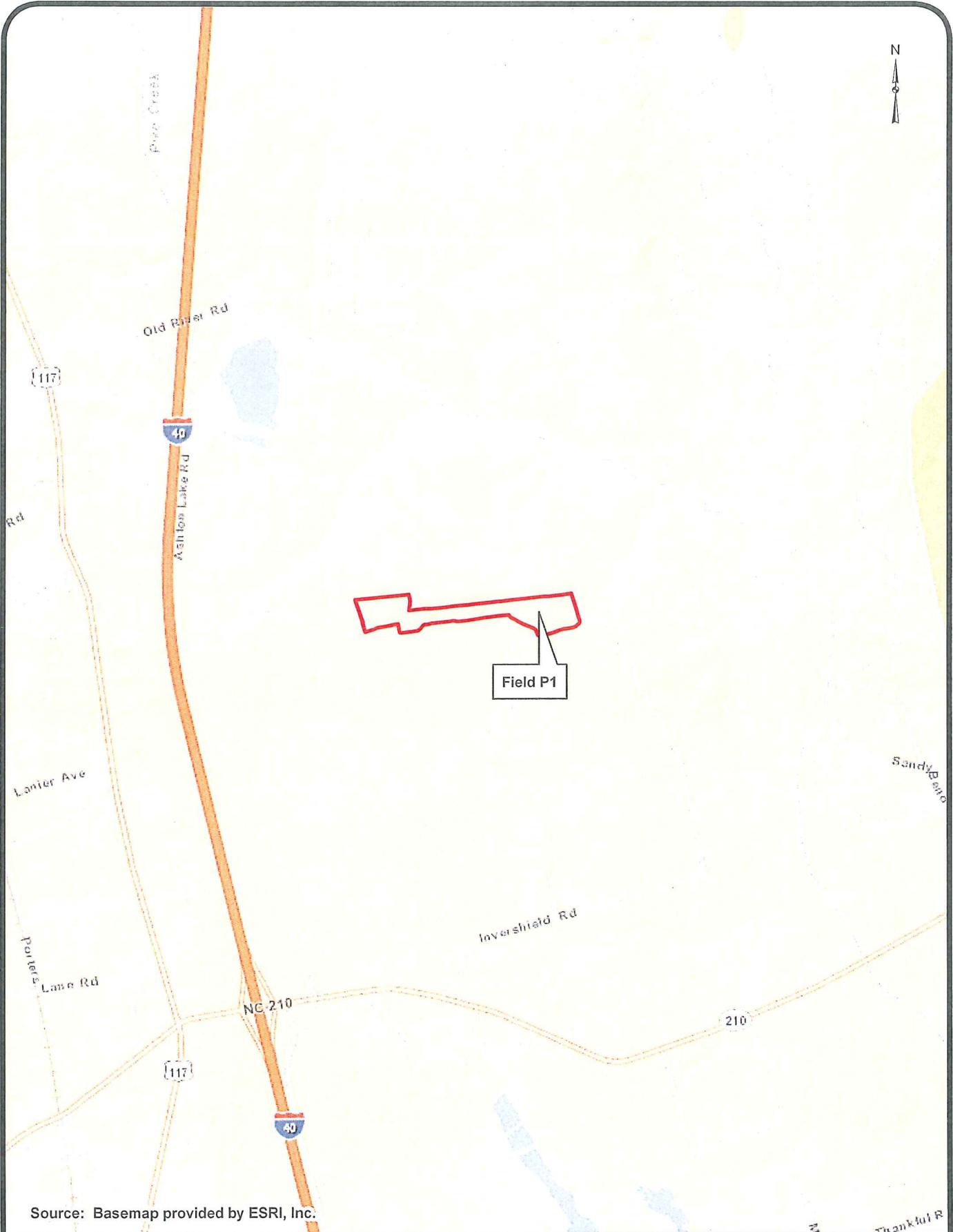
- timing of application events with plant nutritional needs and periods of plant dormancy,
- split application to prevent hydraulic overloading or nutrient leaching,
- performance of proper stabilization methods to fit crop and soil needs,
- maintenance of proper vegetative cover on more sloping areas with runoff potential, and
- proper coordination between application events and crop harvesting.

The results of the soil analysis for this field, included in this report, indicate no gross deficiencies in the fertility of this field. By using standard agricultural practices for the management of forage and crop production, the operator should see significant benefits from the application of septage. In turn, this well-maintained field should provide good assimilation of the plant available nutrients contained in the septage and afford an environmentally safe means of solids disposal and nutrient recycling.



Martin Mabe
Martin Mabe
Agronomist

Rob Willcox
Rob Willcox, L.S.S.
Soil Scientist



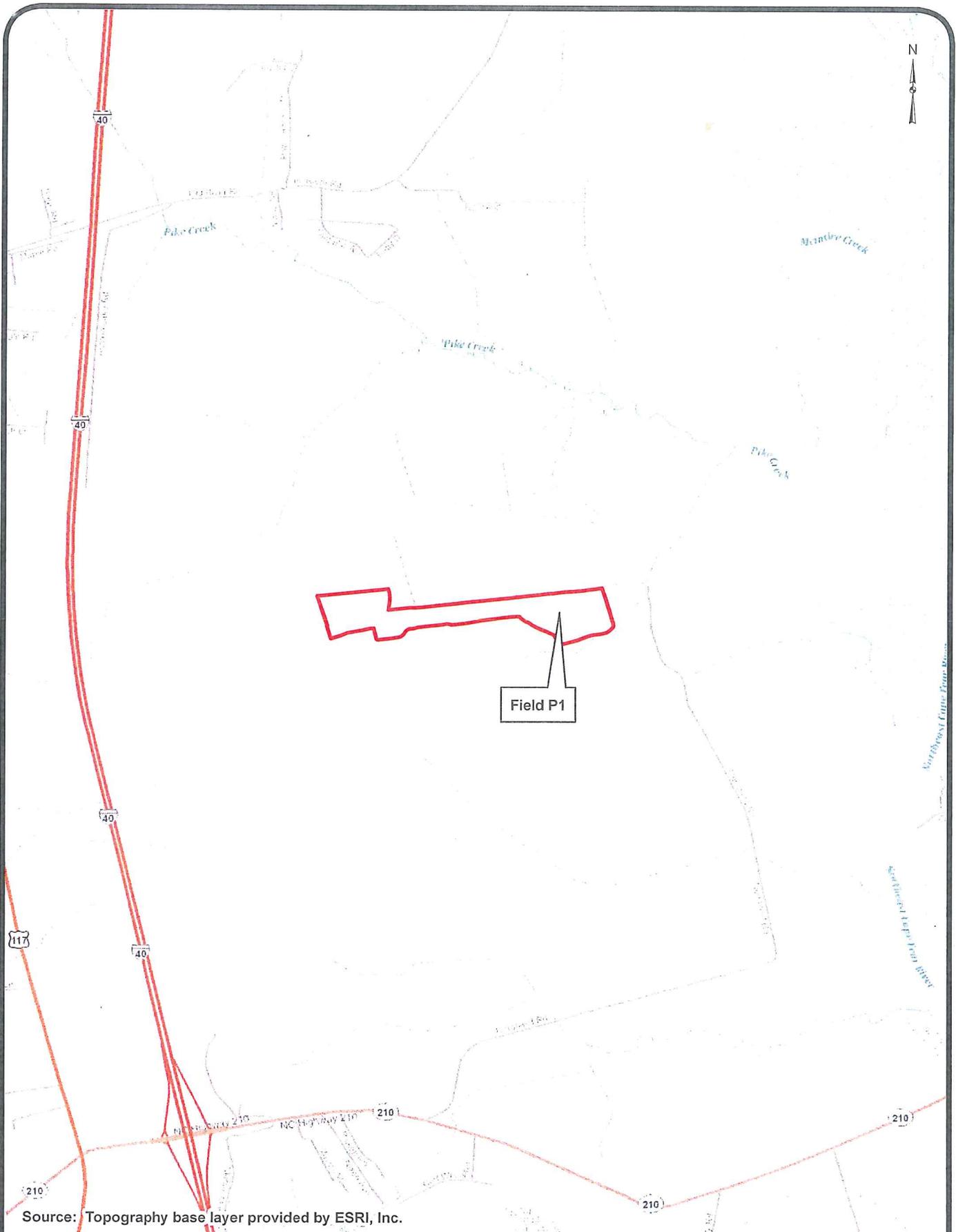
Source: Basemap provided by ESRI, Inc.

SCALE:	1" = 0.5 Mile
DATE:	Sept. 2012
DRAWN BY:	MEM
PROJECT NO:	1588-95-010



COASTAL FARMS AND RESIDUALS, LLC.
H. ALLEN WOOTEN & WESLEY A. WOOTEN PROPERTY
 VICINITY MAP
 PENDER COUNTY, NC

FIGURE NO.
1



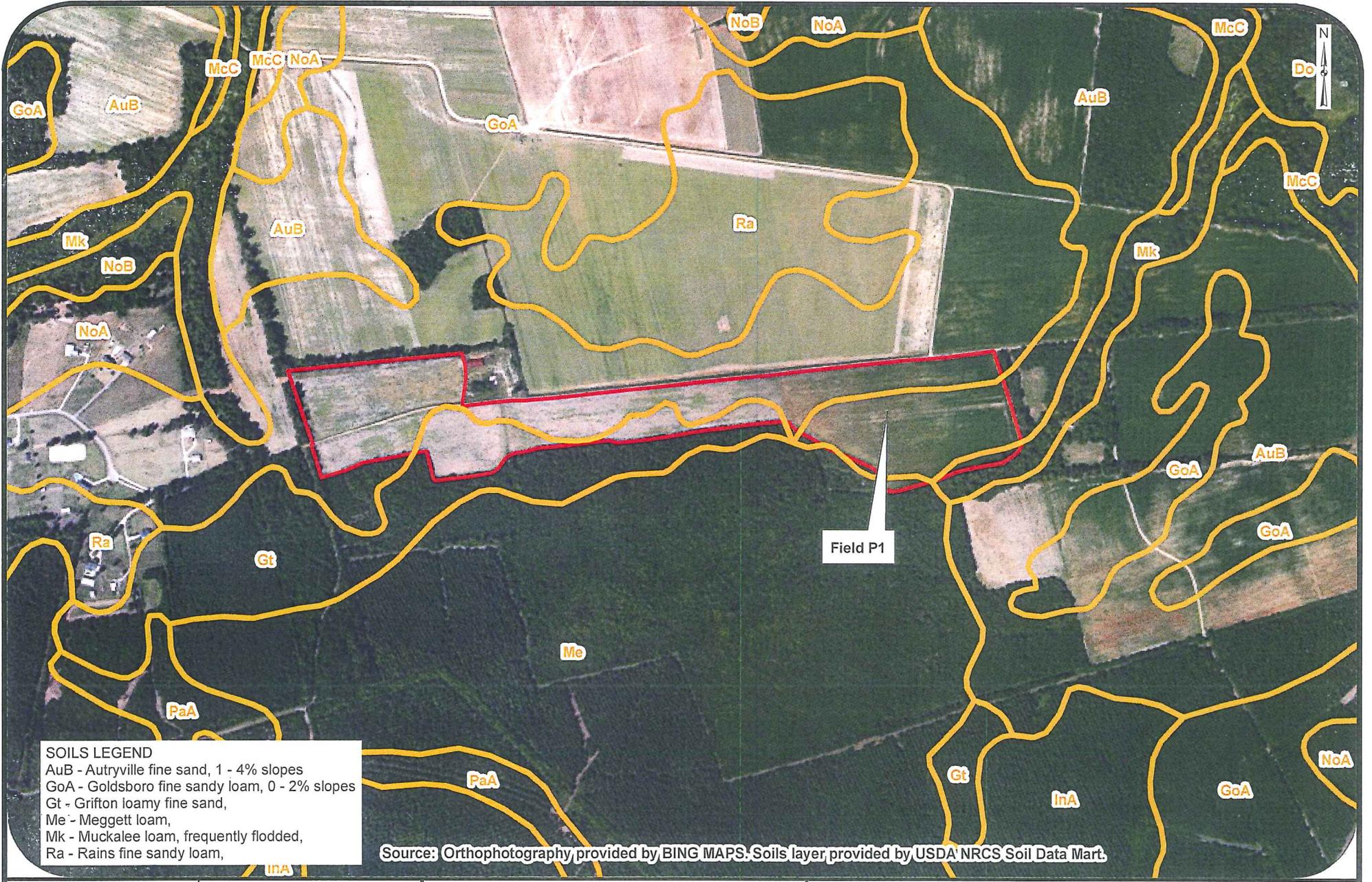
Source: Topography base layer provided by ESRI, Inc.

SCALE: 1" = 2000'
 DATE: Sept. 2012
 DRAWN BY: MEM
 PROJECT NO: 1588-95-010



COASTAL FARMS AND RESIDUALS, LLC.
H. ALLEN WOOTEN & WESLEY A. WOOTEN PROPERTY
 USGS TOPOGRAPHY MAP
 PENDER COUNTY, NC

FIGURE NO.
2



SOILS LEGEND
 AuB - Autryville fine sand, 1 - 4% slopes
 GoA - Goldsboro fine sandy loam, 0 - 2% slopes
 Gt - Gritton loamy fine sand,
 Me - Meggett loam,
 Mk - Muckalee loam, frequently flodded,
 Ra - Rains fine sandy loam,

Source: Orthophotography provided by BING MAPS. Soils layer provided by USDA NRCS Soil Data Mart.

SCALE: 1" = 800'	DATE: September 2012
PROJECT NO: 1588-95-010	DRAWN BY: MEM
	CHECKED BY: RPW



**COASTAL FARMS AND
 RESIDUALS, LLC.
 H. ALLEN WOOTEN &
 WESLEY A. WOOTEN PROPERTY**
 NRCS SOIL SURVEY MAP
 PENDER COUNTY, NC

FIGURE NO.
3



Field	Total Acres	Buffered Acres	Net Acres
1	48.9	36.8	12.1

Source: Orthophotography provided by BING MAPS.

SCALE:
1" = 500'

DATE:
September 2012

PROJECT NO:
1588-95-010

DRAWN BY:
MEM

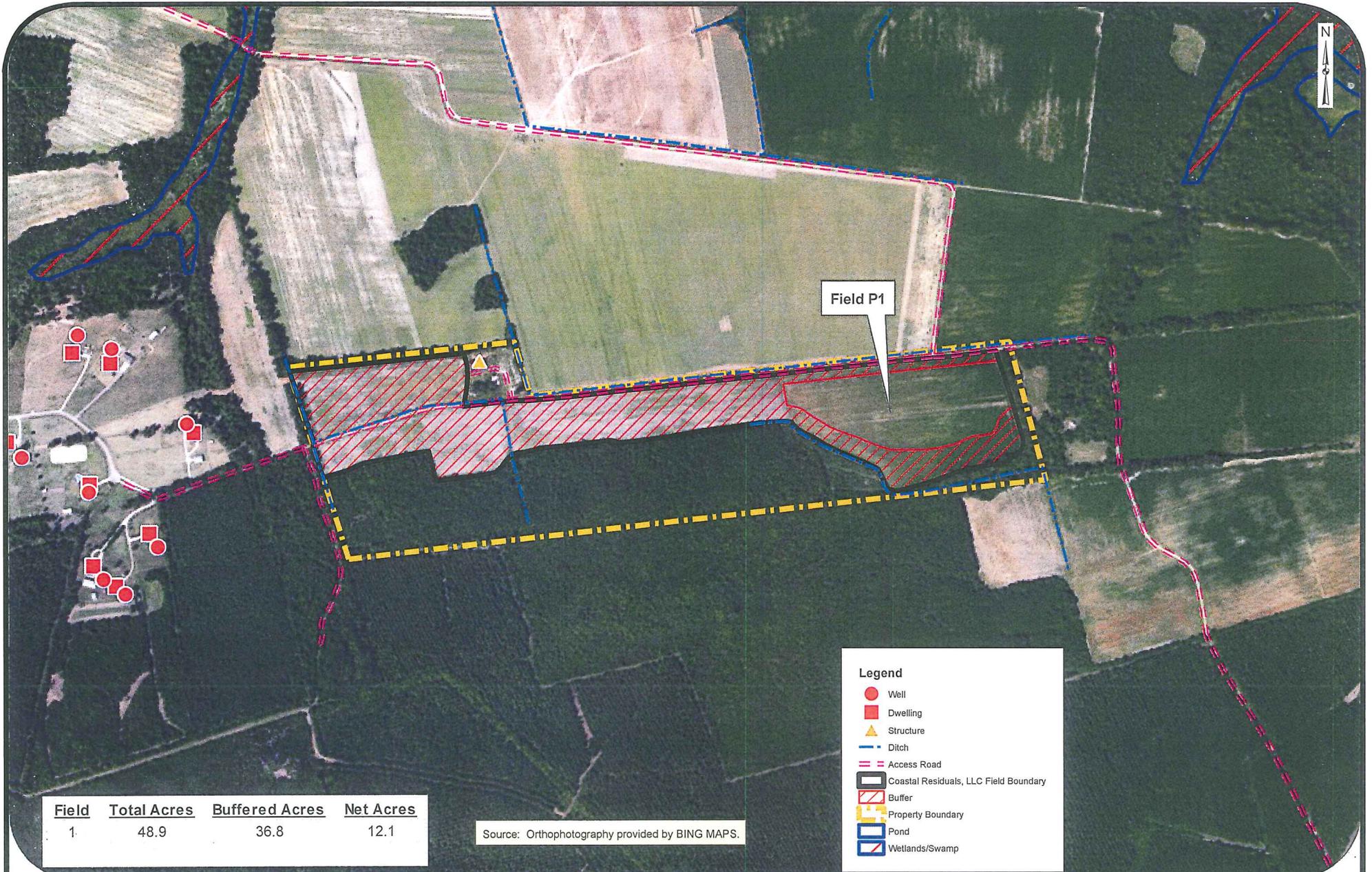
CHECKED BY:
RPW



**COASTAL FARMS AND
RESIDUALS, LLC.
H. ALLEN WOOTEN &
WESLEY A. WOOTEN PROPERTY**
BUFFER MAP
PENDER COUNTY, NC

FIGURE NO.

4



Field P1

Field	Total Acres	Buffered Acres	Net Acres
1	48.9	36.8	12.1

Source: Orthophotography provided by BING MAPS.

Legend

- Well
- Dwelling
- ▲ Structure
- - - Ditch
- - - Access Road
- Coastal Residuals, LLC Field Boundary
- Buffer
- Property Boundary
- Pond
- Wetlands/Swamp

SCALE:
1" = 800'

DATE:
September 2012

PROJECT NO:
1588-95-010

DRAWN BY:
MEM

CHECKED BY:
RPW



**COASTAL FARMS AND
RESIDUALS, LLC.
H. ALLEN WOOTEN &
WESLEY A. WOOTEN PROPERTY**
BUFFER MAP
PENDER COUNTY, NC

FIGURE NO.
5

S&ME, INC.

SITE/SOIL EVALUATION

Project No. _____ Phone No. _____ Date: 9-12-12
 Location Glennfield Pin _____ County: Deer Property Size _____

Proposed Facility: _____ Water Supply: On-Site Well Evaluation: Auger Boring
 Community Pit
 Public Cut
 Described By: Rob Williams
 Weather: SUNNY, WARM Antecedent Moisture: MOIST Surface Water: N/A

FACTORS	PROFILE #1	PROFILE #2	PROFILE #3	PROFILE #4
Landscape Position %	L 2-1/2	L 2-1/2	L 2-1/2	L 2-1/2
Horizon Depth I	0-7	0-6	0-8	0-8
Color Munsell	10YR 5/3	10YR 4/2	10YR 5/2	10YR 5/2
Texture	sl	sl	sl/s	sl/s
Structure	wgr	wgr	wgr	wgr
Consistence	ns np vfr	ns np vfr	ns np vfr	ns np vfr
Boundary				
Horizon Depth II	7-10	6-10	8-20	8-21
Color - Munsell	10YR 5/6	10YR 5/4	10YR 6/3	10YR 6/3
Texture	sl	sl	sl	sl
Mottles	-	-	-	-
Structure	wsbk	wsbk	wsbk	wsbk
Consistence	ss sp fr	ss sp fr	ss sp fr	ss sp fr
Boundary				
Horizon Depth III	10-17	10-21	20-39	21-30
Color - Munsell	10YR 5/6	10YR 5/4	10YR 5/6	10YR 5/6
Texture	cl/cl	sc	sl/light sc	sl/light sc
Mottles	c-2.5YR 4/8	p/c 10YR 5/6	-	-
Structure	wsbk	wsbk	wsbk	wsbk
Consistence	ss sp fr	ss sp fr	ss sp fr	ss sp fr
Boundary				
Horizon Depth IV	17-36	21-32	39-48+	30-48+
Color - Munsell	10YR 5/6	10YR 6/4	10YR 5/6	10YR 5/6
Texture	cl/cl	sc	10YR 5/6	10YR 5/6
Mottles	p/c 10YR 6/2	p/c 10YR 6/2	f-10YR 6/2	f-10YR 6/2
Structure	wsbk	wsbk	wsbk	wsbk
Consistence	ss sp fr	ss sp fr	ss sp fr	ss sp fr
Boundary				
Soil Wetness				
Restrictive Horizon	17" RH	21" SH/D	39" SH/D	30" SH/D
Saprolite				
L/TAR				
Classification	Loess variant	Loess/gyttja variant	Andy silt variant	Andy silt variant

LEGEND

LANDSCAPE POSITION

- R Ridge Interfluvium
- S Shoulder
- L Linear Slope
- S Foot Slope
- N Nose Slope
- H Head Slope
- Cc Concave Slope
- Cv Convex Slope
- T Terrace
- P Flood Plain

TEXTURE

- s sand
- ls loamy sand
- sl sandy loam
- l loam
- si silt
- sil silt loam
- sic silty clay loam
- cl clay loam
- scl sandy clay loam
- sc sandy clay
- sic silty clay
- c clay

CONSISTENCE WET

- Ns non-sticky
- Ss slightly sticky
- S sticky
- Vs very sticky
- Np non-plastic
- Sp slightly plastic
- P plastic
- Vp very plastic

MOIST

- vfr Very friable
- fr friable
- fi firm
- vfi Very firm

STRUCTURE

- sg single grain
- m massive
- cr crumb
- gr granular
- sab subangular blocky
- ab angular blocky
- pl platy
- pr prismatic

multi
c/cl
wsbk
ss sp fr

10YR 6/4
sc
10YR 6/2
wsbk
ss sp fr
10YR 5/6

S&ME, INC.

SITE/SOIL EVALUATION

Project No. _____ Phone No. _____ Date: 7/12/12
 Location FRANKFORD Pin _____ County: PENDLETON Property Size _____

Proposed Facility: _____ Water Supply: On-Site Well Evaluation: Auger Boring
 Community Pit
 Public Cut
 Described By: BOB WILLIAMS
 Weather: SUNNY, WARM Antecedent Moisture: MOIST Surface Water: N/A

FACTORS	PROFILE #5	PROFILE #6	PROFILE	PROFILE
Landscape Position %	L 2-4/10	L 2-4/10		
Horizon Depth I	0-8	0-8		
Color Munsell	10YR 5/2	10YR 5/2		
Texture	sl ls	sl ls		
Structure	Wgr	Wgr		
Consistence	ns sp fr	ns sp fr		
Boundary				
Horizon Depth II	8-15	8-20		
Color - Munsell	10YR 6/3	10YR 6/3		
Texture	sl	sl		
Mottles	-	-		
Structure	Wsbk	Wsbk		
Consistence	ss sp fr	ss sp fr		
Boundary				
Horizon Depth III	15-25	20-30		
Color - Munsell	10YR 6/6	10YR 5.6		
Texture	sc	light-sc		
Mottles	-	-		
Structure	Wsbk	Wsbk		
Consistence	ss sp fr	ss sp fr		
Boundary				
Horizon Depth IV	25-48+	30-39		
Color - Munsell	10YR 6/1	10YR 5/6		
Texture	sc	sc		
Mottles	f/c 10YR 5/1	f/c 10YR 6/4		
Structure	Wsbk	Wsbk		
Consistence	ss sp fr	ss sp fr		
Boundary				
Soil Wetness				
Restrictive Horizon	25" limit	39" limit		
Saprolite				
UTAR				
Classification	Loess variant	subsoil variant		

- LEGEND**
- LANDSCAPE POSITION**
- R Ridge Interfluve
 - S Shoulder
 - L Linear Slope
 - FS Foot Slope
 - N Nose Slope
 - H Head Slope
 - Cc Concave Slope
 - Cv Convex Slope
 - T Terrace
 - P Flood Plain
- TEXTURE**
- s sand
 - ls loamy sand
 - sl sandy loam
 - l loam
 - si silt
 - sil silt loam
 - sicl silty clay loam
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 - scl sandy clay loam
 - sc sandy clay
 - sic silty clay
 - c clay
- CONSISTENCE WET**
- Ns non-sticky
 - Ss slightly sticky
 - S sticky
 - Vs very sticky
- MOIST**
- vfr Very friable
 - fr friable
 - fi firm
 - vfi Very firm
- STRUCTURE**
- sg single grain
 - m massive
 - cr crumb
 - gr granular
 - sbk subangular blocky
 - abk angular blocky
 - pl platy
 - pr prismatic

39-48+
 10YR 5/6
 -sc
 f/c-10YR 5/2
 c-10YR 6/4
 Wsbk



Heavy Metals

Soil Report

Mehlich-3 Extraction

Client: Wesley Wooten
 Attn: Rob Willcox
 3718 Old Battleground Rd
 GREENSBORO, NC 27410
 County: Pender

Advisor: S&ME Inc.
 Attn: Rob Willcox
 3718 Old Battleground Rd.
 Greensboro, NC 27410

Sampled: Received: 10/05/2012 Completed: 10/10/2012 Farm: LEWIS FARMS PLANTATION

[Links to Helpful nformation](#)

Agronomist's Comments:

The heavy metal report is found on a separate page. Using Mehlich 3 as a soil test extractant, background levels of these metals typically seen in NC soils when analyzed are as follows: arsenic (As)- 4.5 ppm, cadmium (Cd)- 0.1 ppm, chromium (Cr)- 0.2 ppm, lead (Pb)- 4.2 ppm, nickel (Ni)- 0.8 ppm, & selenium (Se)- 0.2 ppm (FY2005-2007). Although the above metals here are not believed to pose a concern for plant growth, continue to monitor these and note where elevated above background levels. Note any lime and fertilizer recommendations. Where soil test phosphorus (P) is very high (P-I > 100), crops will not respond to additional P applied. Where the sulfur index (S-I) is 25 or less, sulfur at a rate of 20 to 25 lbs per acre may be of benefit.

Sample ID: P1	Recommendations:	Lime (tons/acre)	Nutrients (lb/acre)									More Information									
			N	P ₂ O ₅	K ₂ O	Mg	S	Mn	Zn	Cu	B										
Lime History:	1 - Soybeans	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Note: 3
	2 - Small Grains	0.0	80-100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Note: 3

Test Results [units - W/V in g/cm ³ ; CEC and Na in meq/100 cm ³ ; NO ₃ -N in mg/dm ³]:											Soil Class: Mineral									
HM%	W/V	CEC	BS%	Ac	pH	P-I	K-I	Ca%	Mg%	S-I	Mn-I	Mn-AI1	Mn-AI2	Zn-I	Zn-AI	Cu-I	Na	ESP	SS-I	NO ₃ -N
0.51	1.16	8.4	88	1.0	6.4	250	87	63	19	36	503	305	305	111	111	100	0.1	1		

Heavy Metals (parts per million):	Arsenic, 0.4	Cadmium, 0.1	Nickel, 0.3	Chromium, 0.2	Lead, 3.4	Selenium, 0.0
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Reprogramming of the laboratory-information-management system that makes this report possible is being funded through a grant from the North Carolina Tobacco Trust Fund Commission.

Thank you for using agronomic services to manage nutrients and safeguard environmental quality.
 - Steve Troxler, Commissioner of Agriculture

Understanding the Soil Report: explanation of measurements, abbreviations and units**Recommendations**Lime

If testing finds that soil pH is too low for the crop(s) indicated, a **lime recommendation** will be given in units of either ton/acre or lb/1000 sq ft. For best results, mix the lime into the top 6 to 8 inches of soil several months before planting. For no-till or established plantings where this is not possible, apply no more than 1 to 1.5 ton/acre (50 lb/1000 sq ft) at one time, even if the report recommends more. You can apply the rest in similar increments every six months until the full rate is applied. If MG is recommended and lime is needed, use dolomitic lime.

Fertilizer

Recommendations **for field crops or other large areas** are listed separately for each nutrient to be added (in units of lb/acre unless otherwise specified). Recommendations for N (and sometimes for B) are based on research/field studies for the crop being grown, not on soil test results. K-I and P-I values are based on test results and should be > 50. If they are not, follow the fertilizer recommendations given. If Mg is needed and no lime is recommended, 0-0-22 (11.5% Mg) is an excellent source; 175 to 250 lb per acre alone or in a fertilizer blend will usually satisfy crop needs, SS-I levels appear only on reports for greenhouse soil or problem samples.

Farmers and other commercial producers should pay special attention to **micronutrient levels**. If \$, pH\$, \$pH, C or Z notations appear on the soil report, refer to [\\$Note: Secondary Nutrients and Micronutrients](#). In general, homeowners do not need to be concerned about micronutrients. Various crop notes also address lime fertilizer needs; visit ncagr.gov/agronomi/pubs.htm.

Recommendations **for small areas, such as home lawns/gardens**, are listed in units of lb/1000 ft. If you cannot find the exact fertilizer grade recommended on the report, visit www.ncagr.gov/agronomi/obpart4.htm#fs to find information that may help you choose a comparable alternate. For more information, read [A Homeowner's Guide to Fertilizer](#).

Test Results

The first seven values [soil class, HM%, W/V, CEC, BS%, Ac and pH] describe the soil and its degree of acidity. The remaining 16 [P-I, K-I, Ca%, Mg%, Mn-I, Mn-AI1, Mn-AI2, Zn-I, Zn-AI, Cu-I, S-I, SS-I, Na, ESP, SS-I, NO3-N (not routinely available)] indicate levels of plant nutrients or other fertility measurement. Visit www.ncagr.gov/agronomi/uyrst.htm for more information.

Report Abbreviations

Ac	exchangeable acidity
B	boron
BS%	% CEC occupied by basic cations
Ca%	% CEC occupied by calcium
CEC	cation exchange capacity
Cu-I	copper index
ESP	exchangeable sodium percent
HM%	percent humic matter
K-I	potassium index
K2O	potash
Mg%	% CEC occupied by magnesium
MIN	mineral soil class
Mn	manganese
Mn-AI1	Mn-availability index for crop 1
Mn-AI2	Mn-availability index for crop 2
Mn-I	manganese index
M-O	mineral-organic soil class
N	nitrogen
Na	sodium
NO3-N	nitrate nitrogen
ORG	organic soil class
pH	current soil pH
P-I	phosphorus index
P2O5	phosphate
S-I	sulfur index
SS-I	soluble salt index
W/V	weight per volume
Zn-AI	zinc availability index
Zn-I	zinc index

Report Number
12-263-0546

Page: 1 of 1

Account Number
45826



A&L Eastern Laboratories, Inc.

7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To : S&ME (JOB#1588-95-010)
ROB WILLCOX
3718 OLD BATTLEGROUND RD
GREENSBORO , NC 27410-2314

Submitted By : ROB WILLCOX
Purchase Order : 0029
Report Date : 9/27/2012
Date Received : 9/19/2012

Client : PLANTATION/LEWIS FARMS

REPORT OF ANALYSIS

Mercury

MEHLICH 3 HG

Lab No	Sample ID Sample Date and Time	ppm
01632	P1	< 0.400

Method Reference:

Mehlich, A. 1984. Mehlich 3 soil test extractant. Comm. Soil Sci. Plant Anal. 25:1409-1416.

Pauric McGroary

Sample results are reported 'as received' and are not moisture corrected unless noted

Septage Nutrient Management Plan
for
Lewis Farms

Owner: Coastal Farms & Residuals, LLC
8155 Malpass Corner Rd.
Currie, NC 28435
(910) 283-9823
(new application)

Purpose: The purpose of this document is to present the septage nutrient management plan proposed for the H. Allen Wooten and Wesley A. Wooten (Plantation) farm located off of Invershield Road (SR 810) in Pender County.

Site Conditions: The relevant property lines, site limits, natural geographic conditions and known site improvements are incorporated from the application permit.

A. General Information:

1. Septage will be sampled at least three (3) times per year for waste analysis. These samples will be used to monitor nutrient loadings. The recommended procedure for collecting the samples is as follows:
 - a. Make sure the septage has been stabilized at a pH of 12 with hydrated lime for 30 minutes (domestic septage) or for 2 hours (grease trap septage).
 - b. Set out some pans in the path where the truck will be disposing the septage. Plastic pans are recommended. Do not use zinc plated or galvanized metal pans; the metals content will be distorted.
 - c. Mix contents of 3-4 pans and fill a 16-20 ounce plastic bottle $\frac{3}{4}$ full. Squeeze out some of the excess air and label the bottle with your name and septage sample identification.

If samples are collected over a couple of days or from different truckloads, it makes for a more representative sample; however, samples should be kept cool and mailed as soon as possible. Only one sample is needed, as long as it is mixed from several different sub-samples.

Mail the samples directly to NCDA&CS or bring the samples by the Extension Office for forwarding to the NCDA&CS labs. Please use a check made out to NCDA&CS (\$5.00 per sample). Bottles need to be clearly labeled as a household -lime stabilized- septage sample (waste code MLS). For extra security, place the bottle in a plastic freezer bag. The form and check can be put in an envelope and placed in the bag with the bottle.

2. An annual soil sampling of each numbered field will be conducted and the results maintained on file. Pay particular attention to: soil pH, zinc index, and copper index.
3. Total available area for septage application on this site is 12.1 acres.
4. The dominant soil series at this site is Autryville B (1-4 % slope) fine sand.
5. Septage will not be applied when and where the site is untrafficable. Untrafficable is defined as soil that will allow a loaded truck to leave a depression in sod greater than 3 inches in depth. It also will not be applied when the field is flooded, frozen, or snow covered.
6. Grease septage is to be diluted at least 1:1 from its original concentration when pumped with domestic septage or water. Grease septage applications shall not exceed 25,000 gallons/acre/yr.
7. Septage storage shall be provided to account for the average volume of septage pumped per week, or an alternative plan, such as disposal at a waste treatment plant, should be in place.

B. Crops to be grown and approximate planting and harvest times:

1. Field P1 is in a two-year rotation that includes cereal rye, corn, wheat, and soybeans. The rye or wheat are to be planted by mid-October (early November at the latest) at a rate of approximately 2.5 bu/acre to 3 bu/acre or at rates appropriate under NC Cooperative Extension guidelines for the grain utilized. The rye will be harvested as hay, preferably by late April to early-May. The wheat will be harvested as grain by June. The corn and soybeans will be planted as soon as possible after the preceding crop is removed, and they will be harvested as grain in the fall. The table below gives approximate planting and harvesting dates. These dates have some flexibility due to weather constraints.

The following seeding rates are recommended to meet the realistic yield expectation (RYE) and appropriate stand densities. Under adverse conditions, a much lower percentage of the seeds will establish successfully. For that reason, many seeds are needed to obtain a satisfactory stand. During drought and other adverse conditions, reseeding may be necessary:

- Cereal rye: 2.5-3 bu/acre (140-160 lbs per acre)
- Wheat: 2.5-3 bu/acre (150-180 lbs per acre)
- Corn: 30 lbs per acre
- Soybeans: 70 lbs per acre

2. Crop rotation table:

<i>Year</i>	<i>Field P1</i>	
1	cereal rye	November-April
	corn	May-September
2	wheat	October-June
	soybeans	June-November

3. Weed control

If weeds become a problem, contact your technical specialist for assistance and/or the most recent *North Carolina Agricultural Chemicals Manual* for herbicides to control specific weeds. Weed control for the various crops is very weed specific. Please consult one of your local advisors for proper identification and control recommendations.

C. Nitrogen needs for crops grown:

RYE = Realistic Yield Expectation for Autryville B in Pender

N App. Rate = Suggested nitrogen application rate

<i>Field PI</i>	<i>Crop</i>	<i>RYE</i>	<i>N App. Rate</i>	<i>Total lbs N/ac</i>	<i>*Gal/ac/yr</i>	<i>Adjusted Gal/ac/yr</i>	<i>Actual lbs N/ac</i>
yr 1	cereal rye	7 t/ac	12.2 lb/ton	85	32,692	20,000	52
	corn	85 bu/ac	1.22 lb/bu	104	40,000	30,000	78
yr 2	wheat	45 bu/ac	2.32 lb/bu	104	40,000	20,000	52
	soybeans	25 bu/ac	3.98 lb/bu	100	38,461	30,000	78

*This column represents the number of gallons needed to meet the total nitrogen needs of the crops. The maximum permitted application is 50,000 gal/acre/yr, with a maximum winter monthly application of 5,000 gal/acre.

The cereal rye will be harvested as hay and removed from site. If used for animal feed or bedding, no septage applications can be made within 30 days of harvest. The **Adjusted gal/acre/year** column represents what can be applied so as not to exceed the maximum permitted application rate of 50,000 gal/acre/yr.

Because the nitrogen needs will not be met, commercial nitrogen fertilizer, such as 10-0-0 can be used IF NEEDED. A Plant Tissue Analysis sample can be collected to determine if the plants are deficient. If fertilizer is used, it is important that the crop N requirements not be exceeded! The following amounts of commercial fertilizer can be added to each crop:

- Cereal rye: 33 lbs nitrogen
- Corn: 26 lbs nitrogen
- Wheat: 52 lbs nitrogen
- Soybeans: 22 lbs nitrogen

All such additions are to be documented. From the NCDA&CS Soil Analysis dated 10/10/2012, the fields do not need additional phosphorus (P-I > 200). Although corn is actively growing in May-August, it is not practical to apply septage over the crop using a pumper truck. The same is true for the soybeans. Applications for these crops would be made post-harvest of the preceding crop, immediately pre/post planting the corn or soybeans.

The amount of supplemental N is based on the RYE for the field soil type. For example, the RYE for corn is 85 bu/acre. The nitrogen application can be increased if crop yield records are kept. To do this, the average yield from the best three out of five years is calculated. If that yield was 150 bu/acre, the new application rate would be determined as follows:

$$\text{Yield} \times \text{N/bushel} = 95 \text{ bu/acre} \times 1.22 \text{ lb N/bu} = 116 \text{ lb N/acre} - 78 \text{ lb N septage} = 38 \text{ lb N fert.}$$

D. Monthly/yearly application rate estimates in gallons:

<i>Crop</i>	<i>Maximum Uptake Period</i>
Cereal rye	February-April
Corn	May-July
Wheat	February-April
Soybeans	July-September

As shown in the above table, the cereal rye and wheat have their maximum nutrient uptake during February through April. There is some uptake, however, as these crops first grow and become established. It is generally recommended that 1/3 of the nutrients be applied during the lower growth months (November-January) and the remaining 2/3 be applied during February-April. Applications should not be made to the corn or soybean fields outside of the application dates listed above.

It is understood that pumping requests from homeowners are greatest during the winter months. The application recommendations in the table below, therefore, are given as the permissible amount WEATHER, CROP, and FIELD CONDITIONS PERMITTING.

<i>Field P1 application per acre</i>		
<i>Month</i>	<i>Gallons</i>	<i>Crop</i>
January*	low	wheat
February*	low	wheat
March*	medium	wheat
April	low	wheat
May	none	wheat
June	high	soybeans
July	high	soybeans
August	high	soybeans
September	low	soybeans
October	low	soybeans/rye
November*	low	cereal rye
December*	low	cereal rye
January*	low	cereal rye
February*	low	cereal rye
March*	medium	cereal rye
April	medium	cereal rye
May	medium	corn
June	high	corn
July	high	corn
August	low	corn
September	none	corn
October	low	corn/wheat
November*	low	wheat
December*	low	wheat

Low = up to 5,000 gallons; medium = up to 10,000 gallons; high = up to 15,000 gallons

Note: Application dates are approximate and subject to adjustments due to harvesting (30 day rest periods) and weather. They are given as an application guide.

* These months can have wetter soil conditions than during the other months. It is exceedingly important that the applications be applied to the largest surface area practicable, so as not to have any ponding or runoff and to minimize untrafficable areas.

The Winter crop may be harvested upon crop maturity before the specified field harvest date. Regulations mandate that a crop be planted or break dormancy within 30 days of any application of septage.

E. Application method:

The preceding information is based on septage being **evenly applied** over the entire permitted site. For this facility, septage will be applied using a pumper truck with a splash plate, when the crops are of suitable height and the field is trafficable. If the entire field is not covered each time, markers or some form of consistent rotation are needed to ensure that one portion of the field is not more heavily loaded than other portions of the field. This can be done by dividing each field into sub-fields (ex.: 1a, 1b, 1c, etc.).

An application record for each sub-field is highly recommended. Waste record forms SLUR-1 and SLUR-2 can be used for record keeping. These and additional forms are available from the local Cooperative Extension office.

F. Additional fertility requirements:

Optimum nitrogen uptake will not occur if the concentrations of other nutrients limit the crop growth. Septage does not provide adequate supplies of all necessary nutrients over a prolonged period of time, so periodic supplements may be required. These maintenance applications should be based on annual soil test analyses. Soil samples should be taken at a consistent time each year, preferable in the Fall. **DO NOT FOLLOW THE NITROGEN RECOMMENDATION FROM THE SOIL TEST REPORT!** You are to use the nitrogen amounts given in this waste application plan.

A separate soil sample should be collected for the buffer areas. Commercial fertilizer applications to the buffers are to be based on the soil sample results. If you have questions, feel free to ask a Certified Waste Management Plan person in the local Cooperative Extension or Soil & Water Conservation offices.

G. Harvest of the crops and their use:

1. The cereal rye will be harvested as hay during April to early May and removed from site. If used for animal feed or bedding, no septage applications can be made within 30 days of harvest.
2. The corn, wheat, and soybeans will be harvested as grain for animal feed.
3. A 30-day waiting period must be observed between the last application of septage and harvest for all material that is to be used as livestock feed or bedding; therefore, an application rotation will need to be established among the fields. Record keeping will be an important factor in documenting proper application. This cycle will continue until the

next plan update or other instructions from either DENR or a Certified Waste Management Plan person. Any changes are to be put into writing, placed in the plan file, and copies given to the appropriate agencies.

H. Records required to be kept for five years:

1. Soil tests are to be done annually and the reports kept. Although nitrogen and phosphorus are the main nutrients of interest, some micronutrients are also of concern. Check your soil test results and compare them to the follow table:

<i>Pollutant</i>	<i>Maximum Cumulative Loading Rate (kilograms per hectare)</i>	<i>Equivalent Soil Test Report Value (parts per million)</i>
Zinc	2800	1400
Copper	1500	750
Cadmium	39	19.5
Nickel	420	210
Lead	300	150
Selenium	100	50
Arsenic	41	20.5
Mercury	17	8.5

2. Septage pumping log (modified SLUR-1)
3. Septage land application log (modified SLUR-2)
4. Septage land application log cover sheet with signed certification

The NC Septage Management Rules (15A NCAC 13B .0822(e)) and the Federal Rules (40 CRF 503.17(b)) require that specific information be recorded and maintained for septage land application sites. Incomplete record keeping may result in penalties. If you do not include the required records your site may not be re-permitted. If you have more than one site and each site has a separate permit number, the records for each must be maintained separately.

One **Septage Land Application Log Cover Sheet** is to be attached to each set of log forms submitted to DENR. The **Septage Pumping Log** (modified SLUR-1) is used to record septage pumped by the firm. The **Septage Land Application Log** (modified SLUR-2) is used to record how the septage is treated and land applied. All blocks are to be completed. One Septage Land Application Log is to be kept for each field and crop. If the fields are subdivided for applications, additional forms may be used.

Although not required, crop harvest records are strongly recommended.

Questions regarding the regulations? Contact the Composting and Land Application Branch at 919-707-8285.

Soil Erosion and Runoff Control Plan

Natural Resource Conservation Service best management practices (BMPs) are readily available and directly applicable to septage application sites. Some recommended BMPs for this site include:

1. Maintain a vegetative cover. At any time of the year, crops or their residue should be present on the site.
2. Manage soil surface for maximum infiltration. Minimize soil disturbance by drill planting the Winter small grain crop. If soil compaction should become evident (ponding of applied septage), use a subsoiler to loosen the soil and improve infiltration. Field traffic should be kept to a minimum.
3. Maintain vegetation on swales, ditch channels, and all other field exits for stormwater runoff. Field buffers and borders should also be maintained around the site.
4. Extra care and control may be needed on those areas with increased slope. If possible, field edges should be shaped to detain runoff.

Nutrient management and erosion control plans are not static instruments; they are blueprints for planning and optimizing the defined crop use goals. As crop use goals or site conditions change, the management plan may need to be amended. Information sources, such as Cooperative Extension or Soil & Water Conservation, should be used on an ongoing basis.

Submitted by: Wesley Wate

Date: Nov. 29, 2012

Plan prepared by: Diana M.C. Rashash

Date: November 16, 2012

Address: Diana M.C. Rashash, PhD EI
North Carolina Cooperative Extension
4024 Richlands Hwy.
Jacksonville NC 28540

Phone: (910) 455-5873

Fax: (910) 455-0977

email: diana_rashash@ncsu.edu

Please sign both copies and send one copy to:

*Chester Cobb, Soil Scientist
Division of Waste Management
217 West Jones St.
1646 Mail Service Center
Raleigh NC 27699-1646*