



Environmental Quality

Facility Permit No: SLAS-10-21
S & B Maintenance, LLC
Permit to Operate
December 16, 2015
Page 1 of 4

North Carolina Department of Environmental Quality

Pat McCrory
Governor

Donald R. van der Vaart
Secretary

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WASTE MANAGEMENT
SOLID WASTE SECTION

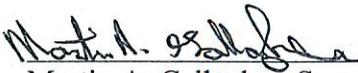
**PERMIT TO OPERATE A SEPTAGE LAND
APPLICATION SITE**

S & B Maintenance, LLC
Mary E. Cook
P.O. Box 8
Bolivia, NC 28422

is hereby permitted to operate Septage Land Application Site with permit # **SLAS-10-21** located on SR#1506 in Brunswick County at approximate position 34.01529° N latitude and -78.14283° E 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 12/16/2015


Martin A. Gallagher, Supervisor
Composting & Land Application Branch,
Solid Waste Section
Division of Waste Management, NCDEQ

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 This permit shall become void if the soils fail to adequately assimilate the septage and shall be rescinded unless the site is maintained and operated in a manner which will protect the assigned water quality standards of both surface and ground waters.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 Mary E. Cook and approved by the Division of Waste Management. **The 3.3-acre site is managed as one field that is established in bermudagrass.** The mandatory 30-day waiting period between the last application of septage and the harvest of a crop shall be maintained by utilizing an alternative disposal location approved by the Division. 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 Mary E. Cook in such a manner as to prevent the migration of wastes off of the designated waste receiving site. 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 (including portable toilet waste) and grease septage.** 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 pH 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. Grease septage when applied over perennial vegetation shall be diluted as per Rule 15A NCAC 13B .0838(a)(15).

7. **This site contains approximately 3.3 acres that are available for land application of septage.** The maximum annual application rate shall be 50,000 gallons per acre per year. At this application rate, a maximum annual volume of 165,000 gallons may be applied to this site. The maximum annual application rate assumes equal septage distribution, on an annual basis, over the entire permitted area. Application rates to the disposal fields shall not exceed the maximum annual application rate or the monthly application 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 3,173 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 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 December 16, 2020.** 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 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 to meet the minimum setback distances as described in 15A NCAC 13B .0837(d) such as 500 feet from any existing wells, residences, places of business, or places of public assembly. Also, septage shall not be disposed of within 50 feet of any property line, within 100 feet of any ditch or within 200 feet of any surface water unless specified otherwise.



Waste Management
ENVIRONMENTAL QUALITY

PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

LINDA CULPEPPER
Director

December 16, 2015

Ms. Mary E. Cook
S & B Maintenance, LLC
P.O. Box 8
Bolivia, NC 28422

**RE: SLAS permit renewal
S & Maintenance LLC
SLAS-10-21
SR#1506 in Brunswick County**

Dear Ms. Cook:

The NC Division of Waste Management has reviewed your renewal application for a Septage Land Application Site permit in Brunswick County. Your application has been approved and your permit, # **SLAS-10-21**, is enclosed. If you have any questions about your permit, we'll need the number in order to answer your questions.

Please read all of your permit conditions carefully. Your nutrient management and soil erosion and runoff control plans have been included in your permit's conditions. In particular, review Permit Condition 15, which states that you will need to submit septage application logs for your site in order to renew your permit. These logs need to cover the entire time your current permit is valid. For details on the information you should include, consult the NC Septage Management Rule 15A NCAC 13B .0838(e)(1) and the Federal register's 40CFR Part 503.17(b). This permit condition also states that this permit is valid until **December 16, 2020**. If you have any questions, please ask for assistance as rule violations could expose you to administrative penalties.

Please note that to land apply industrial or commercial septage at a permitted septage disposal site you must have **prior approval** from the NC Division of Waste Management. The waste must be sampled prior to being removed from the system. Generally, the Division will request that you have a waste analysis run on septage from each commercial or industrial septage generator before that type of septage is approved for land application.

Use of a land application site or septage detention or treatment facility that is not permitted may result in administrative penalties up to \$15,000 per violation in accordance with NC General Statute 130A-22.

If you have any questions, please contact me at (910) 433-3352 or Martin Gallagher at (919) 707-8280.

Sincerely,

Connie S. Wylie, Soil Scientist
Division of Waste Management, NCDEQ

Enclosures

cc: files
Sammy Carteret, landowner
Brunswick County Health Department

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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 S&B Maintenance, LLC
Address Mary E Cook
PO Box 8 Bolivia NC 28422
Phone 910-253-4689

2. Contact person for site operation (if different from applicant):
Title or position owner Phone 910-540-5790
Address PO Box 8 Bolivia, NC 28422

3. Landowner Samm P Carteret
Address 3579 Lewis Loop Rd

4. Site Location: County Brunswick State Road Number 1506
Directions to site: Hwy 17 to Midway Rd to Lewis loop Rd (1506)
to Carteret Rd

5. Indicate whether request is: new _____ renewal modification

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

Existing site permit number: SLAS-10-21 permit expiration date: 6-25-15

6. Number of acres meeting the requirements of the N.C. Septage Management Rules: 3.3 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): SDTF-10-18 or Brunswick County WWTP
4. Types of septage proposed to be discharged at the site (check all that apply):
 - (a) Domestic septage pumped from septic tanks
 - (b) Grease trap pumpings
 - (c) Portable toilet waste
 - (d) Commercial / Industrial septage
5. Proposed treatment method of each type of septage to be land applied (use additional paper to explain if necessary): Lime stabilized to a PH of 12. The Septage's portable waste will reach a PH of 12 for 30 minutes and be land applied at a PH of 12. Grease will reach a PH of 12 for 2 hours and be land applied at a PH of 12.
6. Proposed method of applying septage to land, including septage distribution plan if required * (use additional paper to explain if necessary): Septage will be pumped from the holding tanks through a hose reel system & spread by tractor or by pump truck with spreader attachment. Septage will be spread evenly across field.
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): AG 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.

Mary E Cook
Signature***
Mary E Cook
Print name

4-30-15
Date
CO-owner/operator
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.

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 Sammy P Carteret (name of site owner) hereby certify that I am the owner of
6 acres of land located in Brunswick County off of Carteret Rd
and identified by 0786, 0836 (book and page of recorded deed
or tax map parcel) and that I agree to allow Mary E Cook (name of site
operator) to use said land for septage land application for a period of 100 years (length
of time), beginning 6-1-14 (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 _____

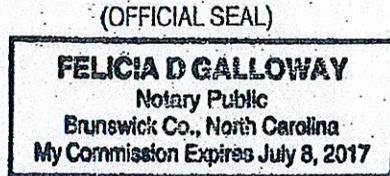
(names of all co-owners, or state none).
Signature of landowner Sammy P Carteret Date 3-9-15

Signature of landowner _____ Date _____
Sworn to and subscribed before me this 9th day of March, 20 15

Felicia D Galloway
(Notary Public)

My Commission expires: 7/8/2017

* 15A N.C. Admin. Code 13B Section .0800
** As required by Rule .0843



NUTRIEMNT MANAGEMENT PLAN
FOR
S & B Maintenance, Inc.
P. O. Box 8
Bolivia, NC 28422
910-253-4689
SLAS 10-18

A. GENERAL INFORMATION:

1. Periodic sampling of the septage will be performed at least twice per year for laboratory waste analysis results.

2. Field #1 contains approximately 3.0 acres.
Field #2 contains approximately 3.0 acres.

*managed as one field
3.3 acres*

The total usable application acreage is approximately 6 acres.

3. The dominate soil series at this site is BAYMEADE.

4. Septage will not be applied when the site is **Untrafficable**. Untrafficable is defined as soil that will allow a loaded truck to leave a depression in the soil greater than 3 inches in depth.

5. All nitrogen recommendation for the forages to be grazed will be a 75% of the realistic yield expectations (RYE) and at 100% if the hay is harvested and removed for the site.

6. **Septage storage** shall be provided on site 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 APPROPRIATE PLANTING DATES:

1. On all established Bermuda grass fields where septage is applied, the following practices will be performed. Cereal Rye or Rye Grass will be established in the fall (September – November) and will be harvested periodically throughout the winter. Harvesting the rye in the spring (April- May) will prevent the rye/ryegrass from re-growing thus allowing the Bermuda grass to emerge. The Bermuda grass will be periodically harvested throughout the summer (May – September). The summer and winter forage will be removed from the fields. This is a continuous year round cycle.

2. Rye Grass will be planted in the fall (September – November) at the rate of 25 pounds of seed per acre. If Cereal Rye is planted, seed at the rate of a minimum of 75 pounds per acre.

3. The Bermuda grass in Fields 1 and 2 are well established. In areas where the Bermuda grass stands falls below 80% coverage, the area will be re-established in the January – March time period applying sprigs at the rate of 30 – 40 bushels of sprigs per acre to the site to be repaired. Sprigs are to be applied evenly over the area and disked lightly. A cultipacker would greatly enhance the success of the sprig survival.

Alternatively, the site to be re-established may be seeded with one of the seed type Bermuda grasses in the June – August time period. Seed at the rate of 2 pounds of seed per 1000 square feet of area to be re-established or seed at the rate specified on the seed bag. Cover the seed lightly and apply water. The seed should germinate in 4 - 6 weeks.

4. The proper application of the combination of septage, commercial fertilizer, and lime based on an **annual soil test report** should allow for productive forage growth.

C. NITROGEN NEEDS of the CROPS:

(NOTE: A MAXIMUM OF 50,000 GALLON OF SEPTAGE IS PERMITTED PER ACRE PER YEAR, unless prior approval has been received from the DIVISION for an alternative application rate.)

<u>Crops (cut for hay)</u>	<u>RYE</u>	<u>Nitrogen Rate</u>	<u>Total Nitrogen</u>
Bermuda grass	5.9 tons/acre	40 lbs/dry ton	236
Annual Cereal rye	3.0 tons/acre	40 lbs/dry ton	120
Rye Grass	2.5 tons/acre	<u>46 lbs/dry ton</u>	<u>113</u>
		Total Nitrogen	469

RYE = Realistic Yield Expectations

Nitrogen application rate is based upon the RYE of the crop for the dominate soil series in the application area.

D. RELATIVE APPLICATION RATES OF SEPTAGE:

<u>Month</u>	<u>All Application Fields</u>
January	Low
February	Low
March	Medium
April	Medium
May	High
June	High
July	High
August	High
September	Medium
October	Medium
November	Low
December	Low

Note: Low = 5,000 gallons, Medium = 10,000 gallons, High = 15,000 gallons

Note: Annual Cumulative application rate of 50,000 gallon septage per acre cannot be exceeded without prior DIVISION approval. 50,000 gallons per year is approximately 4,166 gallons per month per acre.

E. APPLICATION METHOD:

1. The septage will be applied evenly over the entire permitted application area using a hose reel type irrigation system. A tank truck with a rear splash boom will be used as a back up application method.

F. ADDITIONAL FERTILITY REQUIREMENTS:

1. All fertilizer applications must be based on an **annual soil test report**. The septage probably will not supply all the nutrient requirements for the forages. Some commercial fertilizer will probably be needed to be applied to ensure proper forage growth. The application of the commercial fertilizer should be modified based upon the nutrients applied via the septage. If potassium (K) is required, apply it in the fall (September – October) at the rate of 100 pounds of 0-0-60 per acre or as recommended in the soil test report. Commercial nitrogen can be applied to the Bermuda grass during the growing season to ensure proper growth. All fertilizer application should be based upon an **annual soil test report**. **Prior approval from the Division must be received before applying commercial fertilizer.**

2. Buffer areas where no septage is applied should receive commercial fertilizer based on an **annual soil test report** taken from the buffer area to ensure proper vegetative growth.

G. HARVESTING of the CROPS and their USE:

1. The established Bermuda grass will be cut as hay and baled whenever the grass reaches approximately 16 – 24 inches in height or roughly every 4 – 6 weeks during the growing season. Approximately 3 – 4 harvests can be expected per growing season.

2. The rye (grass/cereal) will be cut as hay and baled in Feb-Mar and Apr-May and removed from all fields.

3. As required by regulation, a 30 day waiting period must be observed between the application of septage and the harvesting of the forage from the fields. On the first day of a month, select a field that does not receive septage for the next 30 days. At the end of the 30 days the forage from this field can be harvested. Upon the removal of the forage from this field, septage application can be resumed on this field. On the first day of the second month, select a different field that does not receive septage for 30 days. At the end of the 30 days, then the forage on this field can be harvested. Upon the removal of the forage from this field then septage application can be resumed. Continue this process until you have harvested all

your fields. This is a year round activity. This process must continue throughout the year, summer and winter, to ensure compliance with the 30 day harvest regulation. This 30 day non-application period before harvest is for all summer and winter forage crops.

4. All forages will be bailed and removed from the production fields or forage may be removed via grazing.

5. If the forage is to be removed via grazing, the above 30 day waiting period prior to harvesting must be observed before the grazing event. Cattle must be removed prior to resumption of septage application. All fields must be visually and physically defined so the cattle can be constrained to the appropriate field.

H. SOIL EROSION and RUNOFF CONTROL:

1. Given that the slopes on this site do not exceed five per cent, the required buffers should suffice to prevent the septage from migrating off the approved application site.

I. ENDANGERED SPECIES:

1. As these fields are maintained as regularly harvested hay production fields, there have been no endangered plants or animals identified.

J. SEPTAGE PERMIT:

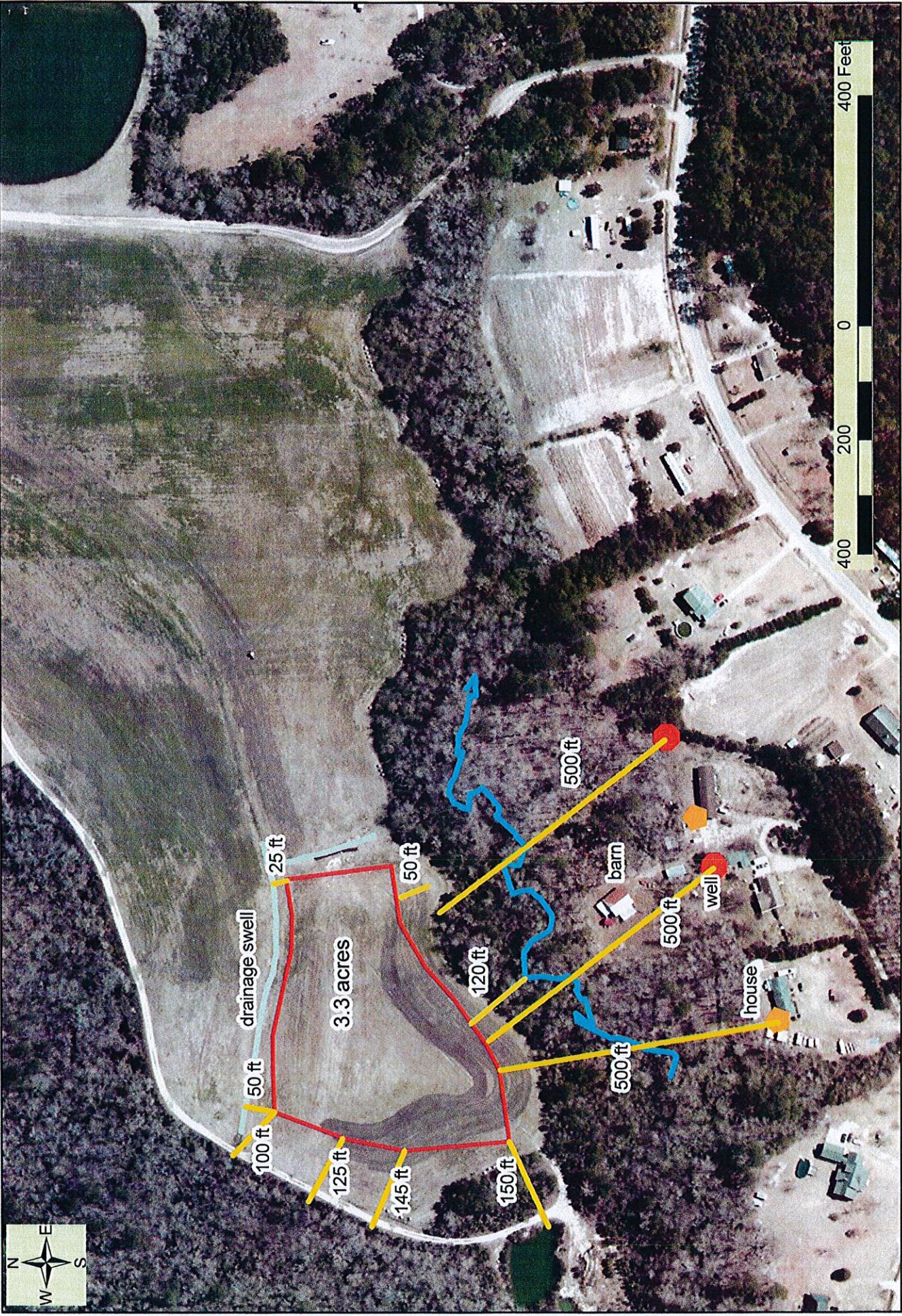
1. This plan prepared for Septage Application Site Number SLAS 10-18.

SUBMITTED BY: Mary Elrod Date 3-4-15
Permit/Site Holder

Plan prepared by: Phillip Ricks
P.O. Box 729
Oak Island, NC 28465
910-278-4685
North Carolina Certified Crop Advisor # 19575
USDA-Technical Service Provider # 031531

34.01529° N latitude
-78.14283° E longitude

SLAS-10-21



Source: Aerial imagery obtained from Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community. Site boundary from NC DENR Division of Waste Management.
Map created by NC DENR Division of Waste Management, Compost and Land Application Branch for permitting purposes only.

