



North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

John E. Skvarla, III
Secretary

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

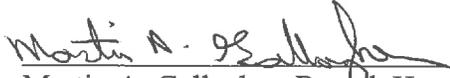
**PERMIT TO OPERATE A SEPTAGE LAND
APPLICATION SITE**

Roberson Septic Service
Allen Roberson
6049 US 301 N.
Elm City, NC 27822

is hereby permitted to operate Septage Land Application Site with permit # **SLAS-98-11** located on SR 1549 in Wilson County at approximate position 35.69186° N latitude and -77.79693° 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 10/6/2014


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 This permit shall become void if the soils fail to adequately assimilate the septage and shall be rescinded unless the site is maintained and operated in a manner which will protect the assigned water quality standards of both surface and ground waters.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 Allen Roberson and approved by the Division of Waste Management. The 23-acre site is divided into three fields, Field 1 (9.1 acres), Field 2 (10.3 acres), and Field 3 (3.6 acres). The fields shall be planted using a crop rotation of soybeans and wheat. The soybeans shall be planted in June, after the wheat harvest, at a rate of 2bu/ac. The wheat shall be planted in November, after the soybean harvest, at a rate of 100 lbs/ac. Areas where crop establishment is less than 80% shall be re-planted. The soybeans shall be harvested in late October and the wheat shall be harvested in June. Septage shall be stored in the permitted septage detention facility in order to meet the 30-day waiting period between the last application of septage and crop harvest. The grain harvested from the soybeans and wheat shall be sold for animal feed. 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 Allen Roberson in such a manner as to prevent the migration of wastes off of the designated waste receiving site. A vegetative buffer of 50 feet shall be maintained around the perimeter of the permitted site. Any site improvements noted in the plan must be installed within 30 days of plan approval. The installation of groundwater monitoring 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.

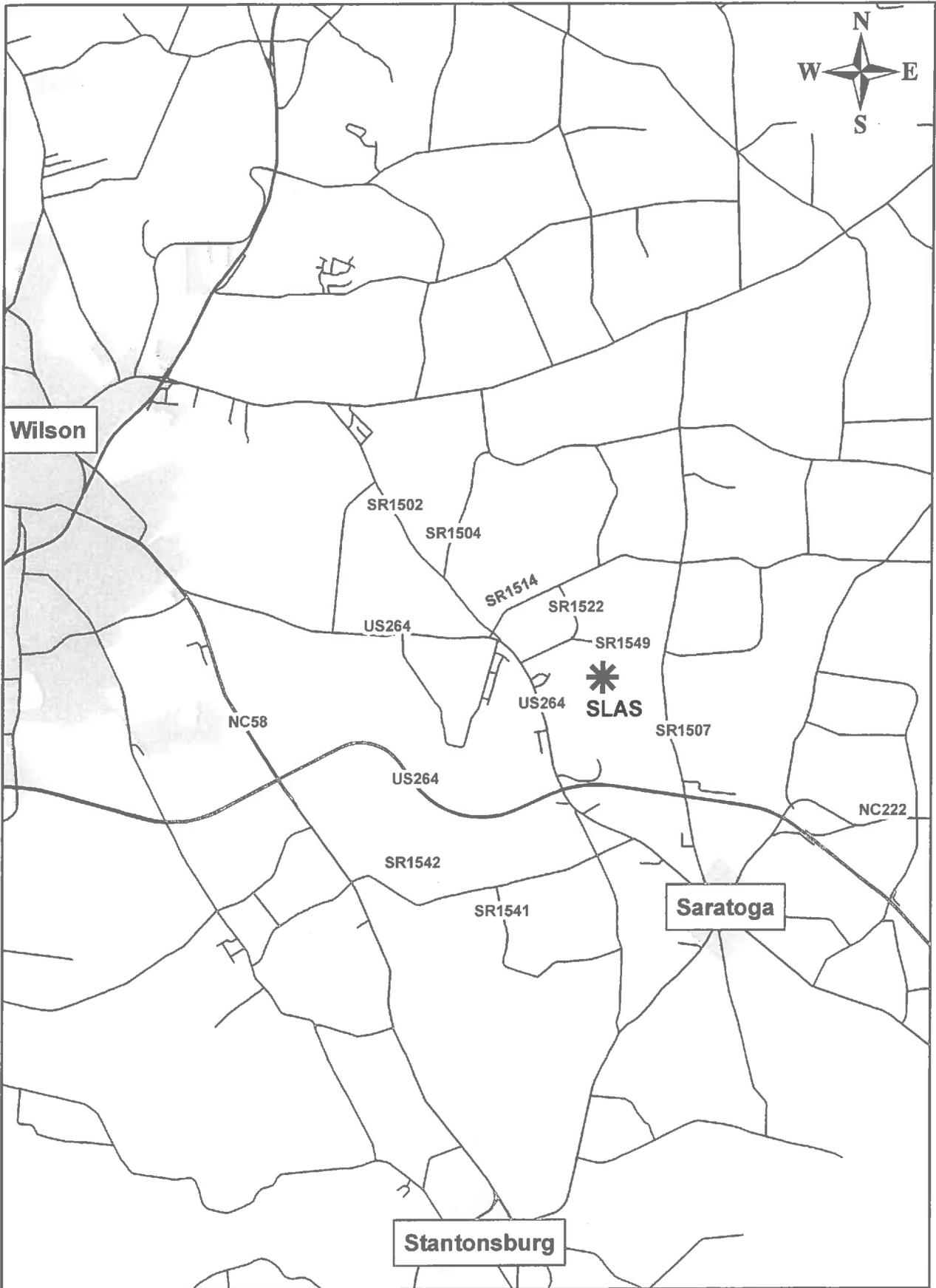
6. **This site is only permitted for the land application of domestic septage, grease trap pumpings, and portable toilet waste.** Domestic septage pH shall be raised to 12 or higher by alkali addition and, without the addition of additional alkali, shall remain at 12 or higher for 30 minutes prior to land application. Grease septage or grease septage mixed with domestic septage shall be raised to 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.
7. **This site contains approximately 23 acres that are available for land application of septage.** The maximum annual application rate shall be 50,000 gal/ac/yr which allows for a maximum annual application amount of 1,150,000 gallons to the site. This application rate assumes equal septage distribution, on an annual basis, over all 3 fields as detailed in the nutrient management plan. 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.
8. An approved above ground septage detention system with a minimum design capacity of 22,000 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 shall be utilized for septage disposal. Uniform coverage of septage across the permitted fields shall be obtained through the use of a hard hose traveler irrigation system and pump truck. All applications whether from the hard hose traveler or pump truck shall be conducted in such a manner that there is no standing water or runoff when the application is complete. Also, the site operator shall monitor wind velocity and direction while applying septage on order to prevent drift and uneven land application.
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 8, 2018.** 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). Also, crop removal shall be recorded. 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 NC Septage Management Rule 15A NCAC 13B .0837 (d) such as 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.

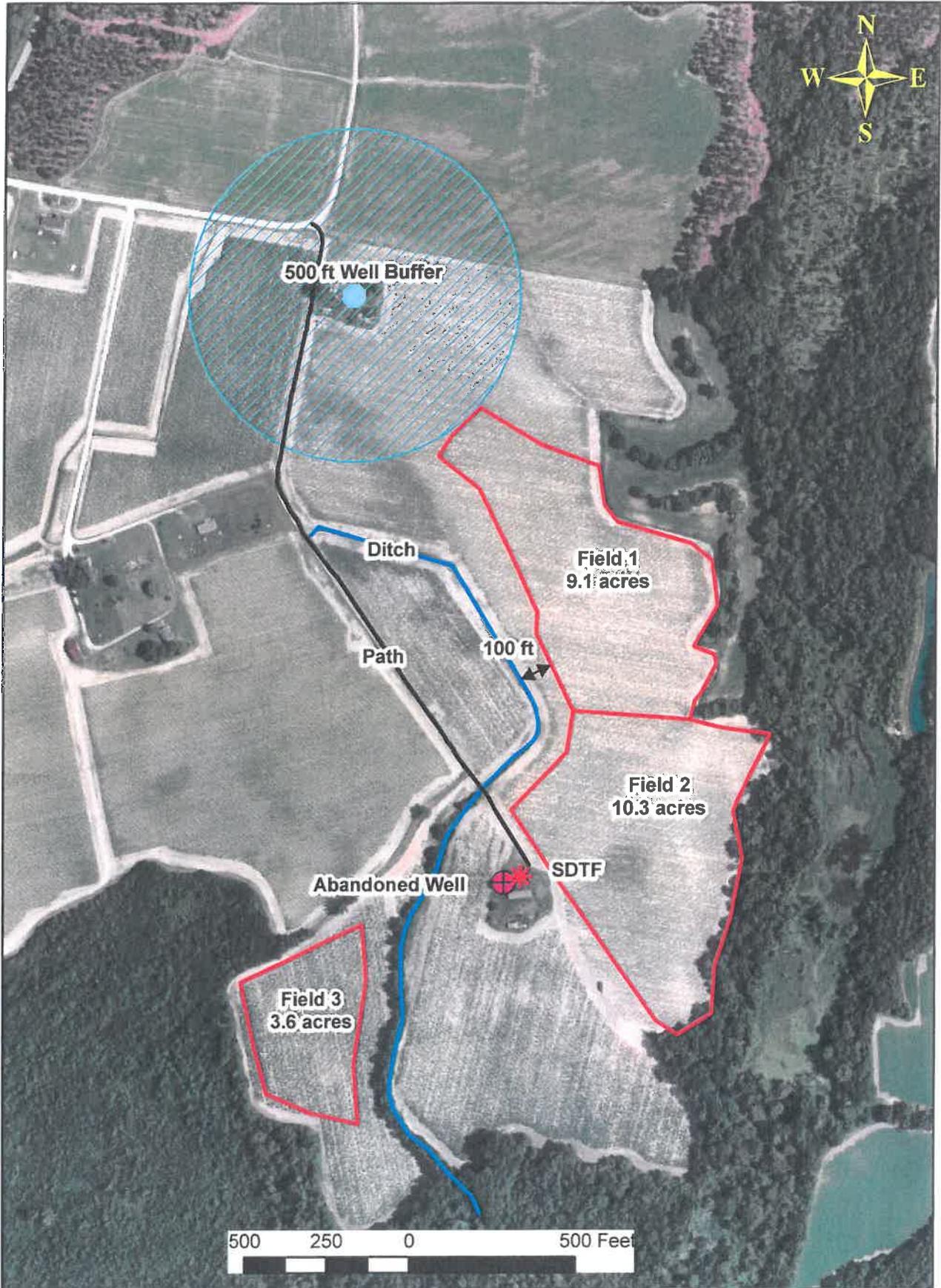
20. The total nitrogen applied to a field shall not exceed the recommended nitrogen amount needed to obtain the realistic yield expectation for the specific crop grown on that field. The total nitrogen amount includes the available nitrogen from the septage and any supplemental nitrogen applied for that year. Any supplemental nitrogen applied to the fields shall be documented with the septage application records.

SLAS-98-11



SDTF-98-11 located in Wilson County off of SR 1549 at approximate position 35.69186° N latitude and -77.79693° W longitude.

SLAS-98-11



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.

crc, June 2012



North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

John E. Skvarla, III
Secretary

December 23, 2014

Mr. Allen Roberson
Roberson Septic Service
6049 US 301 N.
Elm City, NC 27822

**RE: SLAS-98-11 and SDTF-98-11 Permit Renewals
Roberson Septic Service
SR 1549 in Wilson County**

Dear Mr. Roberson:

The NC Division of Waste Management has reviewed your permit application to continue to operate Septage Land Application Site, **Permit #SLAS-98-11**, in Wilson County. Your application has been approved in accordance with NC Septage Management Rules and your permit, **SLAS-98-11**, is enclosed. Please read all permit conditions carefully. Permit #SLAS-98-11 covers 23 acres at a maximum annual application rate of 50,000 gal/ac/yr. The nutrient management and soil erosion and runoff control plans you submitted have been included in your permit. This permit will expire on **June 8, 2018**.

The Division has also reviewed your permit application to continue to operate Septage Detention and Treatment Facility, Permit # **SDTF-98-11**, in Wilson County. Your application has been approved in accordance with the NC Septage Management Rules and your permit, **SDTF-98-11**, is enclosed. Again, please read all permit conditions carefully. Details about the facility are included in your permit. This permit shall expire on **June 8, 2018**.

Again, pay close attention to the enclosed permits. Permit #**SLAS-98-11** covers the operation of your septage land application site and Permit #**SDTF-98-11** covers the operation of your septage detention site. Remember that ninety (90) days prior to the expiration of your permit, you must submit an application for permit renewal. Also, remember that violations to the NC Septage Management Rules or these permits 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 calling about your permits, please reference the permit numbers.

Sincerely,

Chester R. Cobb, Soil Scientist
Division of Waste Management, NCDENR

Enclosures

cc: Central Office
Joseph & Edna Gardner, Landowner
Wilson County Health Department

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SLAS Permit Review

Permit #:

SLAS-98-11

Application Received:

3-6-13

NEW

RENEWAL

MODIFICATION

ISSUED: 6-27-12

EXPIRES: 6-25-13

APPLICATION

- COMPLETE

LANDOWNER AUTHORIZATION FORM

- 5yrs from 6-8-13

MAPS

- On File

NUTRIENT MANAGEMENT PLAN

Crops: Sorghum / WHEAT → CHANGED TO SOYBEANS/WHEAT ON 11/27/13

- Planting:
- 80% coverage (replanting guidelines):
- Harvest:
- Soil Erosion and Runoff Control Plan:

Fields: 3 Acres: 23 Maximum Annual Application Amount: 1,150,000 gal.

FIELD	PERMIT AMOUNT	ACRES
FIELD 1	455,000	9.1
FIELD 2	515,000	10.3
FIELD 3	180,000	3.6

RECORDS

- Septage Land Application Log Cover Sheet
- Overapplied

COMPLIANCE ISSUES AND OTHER COMMENTS

(NOV's and NOD's)

ACRES	9.1	10.3	3.6
PUMP AMOUNT	455,000 gal	515,000 gal	180,000 gal.

	FIELD 1	FIELD 2	FIELD 3
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10-2012

15,000

11-2012

25,200

8-2013

32,000

32,500

64,500 gal

25

26

0

15

72

$72 \times 800 \text{ gal} = 57,600$

REC'D
3-6-13
CRC

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 Roberson Septic Service
Address 6049 U.S. Hwy 301 N.
ELM City, N.C. 27822
Phone 252-236-3483

2. Contact person for site operation (if different from applicant): Allen Roberson
Title or position Owner/Operator Phone 252-236-3483
Address SAME

3. Landowner Joseph & Edna Gardner
Address 6519 Gardner School Rd.
Stantonsburg, N.C. 27883

4. Site Location: County Wilson State Road Number 1549
Directions to site: Hwy 91 to Etheridge Rd.
Etheridge Rd to Janice Ct. Site Down Path

5. Indicate whether request is: new renewal modification

For a permit renewal or modification, provide the following information:
Existing site permit number: SLAS-98-11 permit expiration date: 6-25-13

6. Number of acres meeting the requirements of the N.C. Septage Management Rules: 23 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:

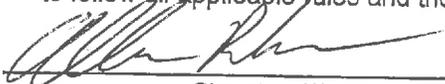
The following information shall be included with the application form:

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): S.D.T.F - 98-11 - City of Rocky Mount - D+D seepage
4. Types of seepage proposed to be discharged at the site (check all that apply):
 - (a) Domestic seepage pumped from septic tanks
 - (b) Grease trap pumpings
 - (c) Portable toilet waste
 - (d) Commercial / Industrial seepage
5. Proposed treatment method of each type of seepage to be land applied (use additional paper to explain if necessary): Bring to A 12 PH and hold for 2 Hrs. for grease with Hydrated Lime, and diluted 1:1 Seepage held for at least 30 minutes at 12
6. Proposed method of applying seepage to land, including seepage distribution plan if required * (use additional paper to explain if necessary): Land apply using HoneyWagon or truck, Moving Vehicle only
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): All Land Proposed for Seepage application is 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. Seepage 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 Seepage Land Application Site permit.


Signature***

Allen Ray Roberson
Print name

2-21-13
Date

Owner
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. Seepage Management Rules.

** Refer to Section .0837(g) of the N.C. Seepage 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, Joseph Gardner (name of site owner) hereby certify that I am the owner of 112 acres of land located on Janice Ct. (SR1549) in Wilson County and identified by Parcel # 3750784209.000 (book and page of recorded deed or tax map parcel) and that I agree to allow Roberson Septic Service - Allen Roberson (name of site operator) to use said land for septage land application for a period of 5 Years (length of time), beginning 6-8-2013 (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 Edna Gardner (wife) (names of all co-owners, or state none).

Signature of landowner Joseph Gardner Date 3-1-13

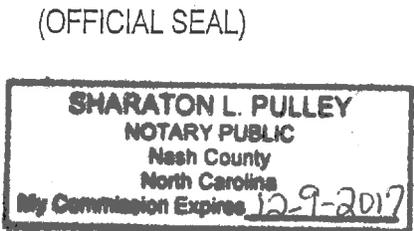
Signature of landowner Edna Gardner Date 3-1-13

Sworn to and subscribed before me this 1 day of March, 2013.

Sharaton L Pulley
(Notary Public)

My Commission expires: 12-9-2017

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



Revised Nutrient Management Plan For Land Application of Septage
To Soybeans/Wheat
Allen Roberson Site
Janice Ct. (PIN 3750.78.4209), Wilson County, North Carolina



A. General Information

1. Periodic sampling (at least 1 /year) of the septage will be conducted for waste analysis.
2. The site lies on a +/- 112 acre tract of land. The area meeting the requirements for land application of septage consists of four application areas totaling 28.0 acres.
3. The dominant soil series at this site are Norfolk (10.51 acre field, 10.25 acre field, and 2.4 acre field), Goldsboro, Gritney (combined 4.83 acre field) and Rains (unsuitable areas). The application areas shown consist of Norfolk, Goldsboro and Gritney soils.
4. Septage will not be applied 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).
5. 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. An application for a storage detention facility accompanies this plan. Applicant has and will maintain NCS# 01202; therefore, discharge to municipal sewer is available if needed.
6. There shall be a 50' setback from the septage application area to any food crop and to any adjoining property not owned or under the control of the applicant.
7. An investigation of the tract revealed the presence of wetlands; however, there are no wetlands within 50' of any proposed septage application area.
8. There is a 100' setback from the ditches to the septage application areas.
9. There is a minimum 200' setback from surface waters located on the east side of the property to the septage application areas.
10. There is a 500' setback from existing residences to the septage application areas. The only area that should be affected by this setback is an area on the northwest corner of the site. The residence is an abandoned house and if destroyed would eliminate the 500' setback shown on the attached map. An existing structure located adjacent to the proposed detention facility will be converted to an office to be used by the owner and applicant.
11. There is a 500' setback from any existing wells to the septage application areas. The well shown near the detention facility is planned for abandonment. If abandoned to DWQ standards, the 500' setback should be eliminated. A well abandonment form accompanies this application. If the wells located at the abandoned house on the northwest corner of the site are abandoned to DWQ standards, the 500' setback should be eliminated.

If the abandoned house is removed and the wells properly abandoned, an additional 4.1 acres should be available for land application of septage.

B. Crops to be grown and approximate planting times:

1. All 28 acres of the application area, the 100' ditch setbacks, the 50' property setbacks and the 50' vegetative buffer are proposed for a crop rotation of Soybeans and Wheat. Soybeans are planned for planting in June at the rate of 2 bu/acre and harvesting in or around late October of each year. Wheat at the rate of 100 lb/ac will follow Soybeans from November to harvest in May - June of each year. To promote stand establishment the following steps should be taken: Periodic soil samples to determine fertility needs. Weed control for row crops may be needed to produce the realistic yield expectations for soybeans and wheat. Weed control can be achieved through different means or a combination of means. For row crops, cultivation and herbicides are often used as weed control methods. For specific recommendations, proper identification of the weed is necessary. Contact the local Cooperative Extension Office or other crop expert for herbicide recommendations.
2. If crop areas fail to establish 80% of the seeding rate, application of septage shall not be allowed until 80% of the seeding rate is established.

C. Nitrogen needs for crops grown

R.Y.E = Realistic Yield Expectations

N. App. Rate = Suggested N application rate based on R.Y.E for soil type

<u>1. Crop</u>	<u>R.Y.E</u>		<u>N App. Rate</u>		<u>lbs N/acre</u>
Soybeans	41 bu	X	3.91 bu/ac	=	160
Wheat	59 bu	X	2.09 lbs N/bu	=	123
			<u>Total</u>		<u>283</u>

So $283 / .0026 = 108,846$ gallons septage/acre for the 10.51-acre, 10.25-acre and 2.40-acre fields shown on the attached map. Septage rules require a maximum annual application rate of 50,000 gallons septage/acre unless otherwise authorized by the Division of Waste Management. Note: Soybeans may require documentation of yields.

<u>2. Crop</u>	<u>R.Y.E</u>		<u>N App. Rate</u>		<u>lbs N/acre</u>
Soybeans	39.5 bu	X	3.87 lbs N/bu	=	153
Wheat	54.5 bu	X	1.98 lbs N/bu	=	108
			<u>Total</u>		<u>261</u>

So $261 / .0026 = 100,384$ gallons septage/acre for the 4.83-acre field shown on the attached map. The realistic yields for Goldsboro and Gritney soils were averaged because

the 4.83-acre is relatively small and contains both soil types. Septage rules require a maximum annual application rate of 50,000 gallons septage/acre unless otherwise authorized by the Division of Waste Management. Note: Soybeans may require documentation of yields.

D. Crop Plan

All 28 acres	
Month	Crop
January	Wheat
February	Wheat
March	Wheat
April	Wheat
May	Wheat
June	Wheat/Soybeans
July	Soybeans
August	Soybeans
September	Soybeans
October	Soybeans/Wheat
November	Wheat
December	Wheat

E. Relative application rate (Soybeans/Wheat)

Jan. Feb. Mar Apr. May Jun. Jul Aug. Sep. Oct. Nov. Dec.

Low Low Med High Med Low Med Med High Low Med Low

Note: None = 0 gallons; Low = 5,000 gallons; Med. = 10,000 gallons; High = 15,000 gallons. Cumulative application rate is not to exceed the permitted application rate.

F. Application Method

The preceding information is based on septage being evenly applied over the entire permitted site by spraying uniformly from moving pump truck. Applicant has indicated he may utilize hose tow irrigation in the future. The required documentation listed in NC Septage Management Rule .0835 (c) 17 must be provided to the Division of Waste Management prior to the use of any type of irrigation system.

G. Additional Fertility Requirements

According to NCDA&CS Agronomic Division no additional phosphorus should be applied at this time. Recommended potassium (K₂O) application rates range from 60 – 80 lbs per acre on the 10.51 acre field, the 10.25 acre field, and the 4.83 acre field. The K₂O rate for the 2.4 acre field should be 50 – 70 lbs per acre. The K₂O rate for the unsuitable areas (shade gray on the enclosed map) should be 30 –

50 lbs per acre. Lime should be added at the rate of 1.0 ton per acre on the 10.25, and 2.5 acre fields. Lime should be added at the rate of .9 ton per acre on the 10.51 and 4.83 acre fields. Lime should be added at the rate of 1.7 ton per acre on the unsuitable areas. For information on application times and amounts see the enclosed copy of the soils report. (Note: Analysis from soil samples taken prior to addition of any septage)

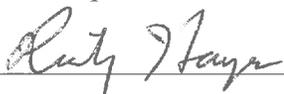
H. Harvest of Crops:

1. The Soybeans will be harvested in late October to early November and will be sold as animal feed.
2. The wheat will be harvested in May/June and sold as animal feed.
3. A 30-day waiting period must be observed between last application of septage and harvest. Septage may be applied to crop stubble after harvest and before the establishment of the next crop. During the 30-day waiting period septage may be stored in an approved detention facility or sprayed on other fields.

I. Soil Erosion and Runoff Control Plan

Slopes on the actual application areas range from 0 to 6 %. All ditch setbacks and property line setbacks that are not wooded will be planted in Soybeans/Wheat to control runoff. The unsuitable areas (shaded gray on the enclosed map) will also be planted in Soybeans/Wheat to control erosion and runoff. A 50' erosion control and food crop buffer needs to be planted on the sideslope between the 10.51 acre field and the field labeled "Area Not Considered For Septage Disposal". The food crop buffer will be planted in the same Soybeans/Wheat rotation as the septage application areas; however, no septage can be applied to the 50' buffer. The wooded area between the surface water on the east side of the property and the application areas should suffice as adequate buffer. There are a series of terraces on the east side of the 10.25 and 2.40 acre fields. No septage application should take place below the terraces. A 50' vegetative buffer should be provided below the terraces. Some areas already meet this requirement. Other areas will need the vegetative buffer established.

Submitted by:  Date: 11-21-13
Site Operator

Plan Prepared by:  Date: 11-21-13

Address: 1806 Goldsboro St S/W
Wilson, NC 27893

Phone: 252-237-5147 X3

Revised Nutrient Management Plan For Land Application of Septage
To Sorghum(Grain)/Wheat
Allen Roberson Site
Janice Ct. (PIN 3750.78.4209), Wilson County, North Carolina

A. General Information

1. Periodic sampling (at least 1/year) of the septage will be conducted for waste analysis.
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5. 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. An application for a storage detention facility accompanies this plan. Applicant has and will maintain NCS# 01202; therefore, discharge to municipal sewer is available if needed.
6. There shall be a 50' setback from the septage application area to any food crop and to any adjoining property not owned or under the control of the applicant.
7. An investigation of the tract revealed the presence of wetlands; however, there are no wetlands within 50' of any proposed septage application area.
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11. There is a 500' setback from any existing wells to the septage application areas. The well shown near the detention facility is planned for abandonment. If abandoned to DWQ standards, the 500' setback should be eliminated. A well abandonment form accompanies this application. If the wells located at the abandoned house on the northwest corner of the site are abandoned to DWQ standards, the 500' setback should be eliminated.

If the abandoned house is removed and the wells properly abandoned, an additional 4.1 acres should be available for land application of septage.

B. Crops to be grown and approximate planting times:

1. All 28 acres of the application area, the 100' ditch setbacks, the 50' property setbacks and the 50' vegetative buffer are proposed for a crop rotation of Sorghum (grain) and Wheat (grain). Sorghum is planned for planting in July and harvesting in late October of each year. Wheat will follow Sorghum from November to harvest in June of each year. To promote stand establishment the following steps should be taken the first year: Treat for weeds and see additional fertility requirements.

2. No septage is planned to be applied to bare soil.

can be applied to bare ground 30 days to plant crop but ca. still apply cro

C. Nitrogen needs for crops grown

R.Y.E = Realistic Yield Expectations

N. App. Rate = Suggested N application rate based on R.Y.E for soil type

<u>1. Crop</u>	<u>R.Y.E</u>		<u>N App. Rate</u>		<u>lbs N/acre</u>
Sorghum	<u>54 CWT</u>	X	<u>1.78 lbs N/CWT</u>	=	<u>96</u>
Wheat	<u>59 bu</u>	X	<u>2.09 lbs N/bu</u>	=	<u>123</u>
<u>Total</u>					<u>219</u>

So $219 / .0026 = 84,231$ gallons septage/acre for the 10.51-acre, 10.25-acre and 2.40-acre fields shown on the attached map. Septage rules require a maximum annual application rate of 50,000 gallons septage/acre unless otherwise authorized by the Division of Waste Management.

<u>2. Crop</u>	<u>R.Y.E</u>		<u>N App. Rate</u>		<u>lbs N/acre</u>
Bermuda Grass	<u>54.5 CWT</u>	X	<u>1.67 lbs N/CWT</u>	=	<u>91</u>
Wheat	<u>54.5 bu</u>	X	<u>1.98 lbs N/bu</u>	=	<u>108</u>
<u>Total</u>					<u>199</u>

So $199 / .0026 = 76,544$ gallons septage/acre for the 4.83-acre field shown on the attached map. The realistic yields for Goldsboro and Gritney soils were averaged because the 4.83-acre is relatively small and contains both soil types. Septage rules require a maximum annual application rate of 50,000 gallons septage/acre unless otherwise authorized by the Division of Waste Management.

D. Crop Plan

All 28 acres	
Month	Crop
January	Wheat
February	Wheat
March	Wheat
April	Wheat
May	Wheat
June	Wheat
July	Sorghum
August	Sorghum
September	Sorghum
October	Sorghum
November	Wheat
December	Wheat

Planting Rate - Seeding

f
a

E. Relative application rate (Sorghum/Wheat)

Jan.	Feb.	Mar	Apr.	May	Jun.	Jul	Aug.	Sep.	Oct.	Nov.	Dec.
Low	Low	Med	High	Med	High	High	Med	Med	Low	Low	Low

Note: None = 0 gallons; Low = 5,000 gallons; Med. = 10,000 gallons; High = 15,000 gallons. Cumulative application rate is not to exceed the permitted application rate.

F. Application Method

The preceding information is based on septage being evenly applied over the entire permitted site by spraying uniformly from moving pump truck. Applicant has indicated he may utilize hose tow irrigation in the future.

G. Additional Fertility Requirements

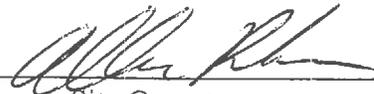
According to NCDA&CS Agronomic Division no additional phosphorus should be applied at this time. Recommended potassium (K₂O) application rates range from 60 – 80 lbs per acre on the 10.51 acre field, the 10.25 acre field, and the 4.83 acre field. The K₂O rate for the 2.4 acre field should be 50 – 70 lbs per acre. The K₂O rate for the unsuitable areas (shade gray on the enclosed map) should be 30 – 50 lbs per acre. Lime should be added at the rate of 1.0 ton per acre on the 10.25, and 2.5 acre fields. Lime should be added at the rate of .9 ton per acre on the 10.51 and 4.83 acre fields. Lime should be added at the rate of 1.7 ton per acre on the unsuitable areas. For information on application times and amounts see the enclosed copy of the soils report.

H. Harvest of Crops:

1. The Sorghum will be harvested in late October to early November and will be sold as animal feed.
2. The wheat will be harvested in June and sold as animal feed.
3. A 30-day waiting period must be observed between last application of septage and harvest. Septage may be applied to crop stubble after harvest and before the establishment of the next crop. During the 30-day waiting period septage may be stored in an approved detention facility or sprayed on other fields.

I. Soil Erosion and Runoff Control Plan

Slopes on the actual application areas range from 0 to 6 %. All ditch setbacks and property line setbacks that are not wooded will be planted in Sorghum/Wheat to control runoff. The unsuitable areas (shaded gray on the enclosed map) will be also be planted in Sorghum/Wheat to control erosion and runoff. A 50' erosion control and food crop buffer needs to be planted on the sideslope between the 10.51 acre field and the field labeled "Area Not Considered For Septage Disposal". The food crop buffer will be planted in the same Sorghum/Wheat rotation as the septage application areas; however, no septage can be applied to the 50' buffer. The wooded area between the surface water on the east side of the property and the application areas should suffice as adequate buffer. There are a series of terraces on the east side of the 10.25 and 2.40 acre fields. No septage application should take place below the terraces. A 50' vegetative buffer should be provided below the terraces. Some areas already meet this requirement. Other areas will need the vegetative buffer established.

Submitted by:  Date: 5/21/12
Site Operator

Plan Prepared by: Scott Stone, Reviewed by Rich Hayes Date: 5/21/12

Address: Wilson SWCD

1806 Goldsboro St, Wilson, NC 27893

Phone: 252-531-3471 252-237-5147 EXT 3

Resubmitted by:  Date: 2/21/13

SEPTAGE LAND APPLICATION LOG

CERTIFICATION

Site Operator: Allen Roberson
SLAS Permit #: 98-11
Site Location: 35.68945°N Lat. and -77.79765°W Long.
(street address for the site or latitude and longitude)
Number of acres permitted: 23
Permitted application rate: 50,000
(gallons septage per acre per year)
Crop(s): Sorghum + Wheat
Crop nitrogen requirement(s): 219
(pounds nitrogen per acre)

CERTIFICATION:

"I certify, under penalty of law, that the pathogen requirements in (insert either 503.32 (c)(1) or 503.32 (c)(2)) and the vector attraction reduction requirements in (insert 503.33 (b)(9), 503.33 (b)(10) or 503.33 (b)(12)) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements and vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

Allen R. Roberson
(signature)

2-21-13
(date)