



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**

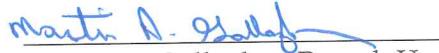
Atlantic Sewage Control
J. Bryan Smith
PO Box 2560
Kitty Hawk, NC 27949

is hereby permitted to operate Septage Land Application Site with permit # **SLAS-27-18** located on SR 1124 in Currituck County at approximate position 36.19767° N latitude and -75.88223° 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

8/27/2014


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>

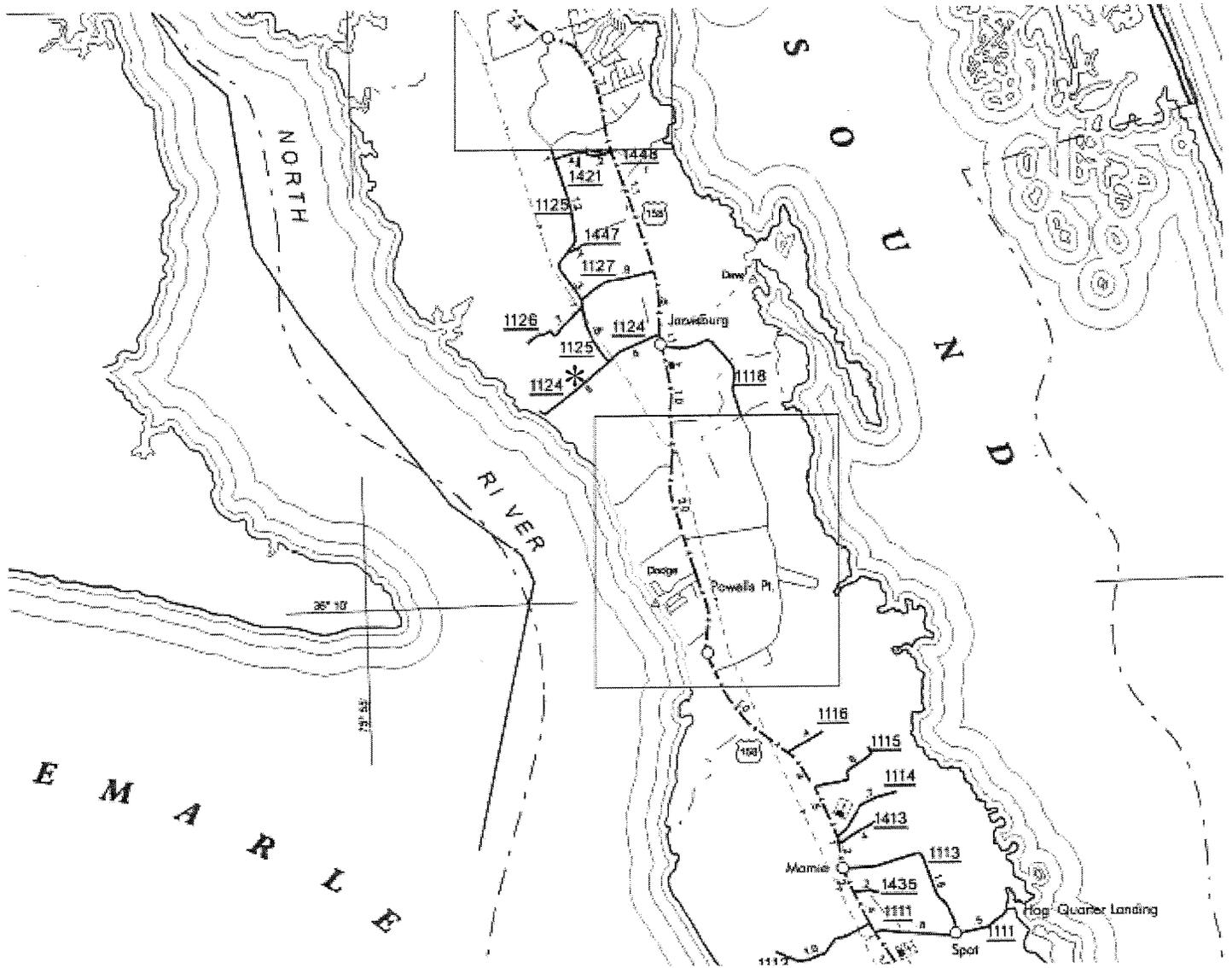
CONDITIONS OF OPERATING PERMIT

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 This permit shall become void if the soils fail to adequately assimilate the septage and shall be rescinded unless the site is maintained and operated in a manner which will protect the assigned water quality standards of both surface and ground waters.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 Atlantic Sewage Control and approved by the Division of Waste Management. The 11.2-acre site has been established in Common Bermudagrass and has been divided into three fields, known as Field 1 (2.5 acres), Field 2 (4.7 acres) and Field 3 (4.0 acres). If a field or area drops below 80% coverage in bermudagrass, the field or area shall be replanted in a forage type bermudagrass such as Cheyene between April and May at a rate of 6 - 8 lbs/ac (broadcast) or 5 - 7 lbs/ac (drilled). The bermudagrass shall be overseeded with rye by November 1 each year at a rate of 120 lbs/ac (broadcast) or 100 lbs/ac (drilled). The bermudagrass shall be cut as hay and baled whenever it reaches approximately 12 inches in height or roughly every 4 to 6 weeks beginning in June. The rye shall be cut as hay and baled in March of each year. The 30-day waiting period between the last application of septage and the harvest of any crop shall be met by alternating septage applications between the three fields or other permitted septage land application 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 Atlantic Sewage Control 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, portable toilet waste and commercial / industrial septage. Commercial / industrial septage shall only be land applied after the waste from each source is tested and the results approved by the Solid Waste Section.** 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 11.2 acres that are available for land application of septage.** The maximum annual application rate shall be 100,000 gal/ac/yr. At this application rate, a maximum annual volume of 1,120,000 gallons may be applied evenly across the permitted area. Of the 100,000 gal/ac/yr, the rye may receive up to 30,000 gal/ac/yr and the bermudagrass may receive up to 70,000 gal/ac/yr. The maximum annual application rate assumes equal septage distribution, on an annual basis, over all three (3) fields as described 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 for the site.
8. An approved above ground septage detention system with a minimum design capacity of 23,000 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 April 1, 2019.** 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. **Estimates of crop removal shall be determined by physically weighing approximately one-fourth (1/4) to one-half (1/2) of the hay removed for each harvest. A representative sample shall be taken from 10 to 15% of the hay for each harvest and submitted to NCDA or another appropriate lab facility for nutritive analysis of the hay.** These records shall be made available to a representative of the Division upon request.

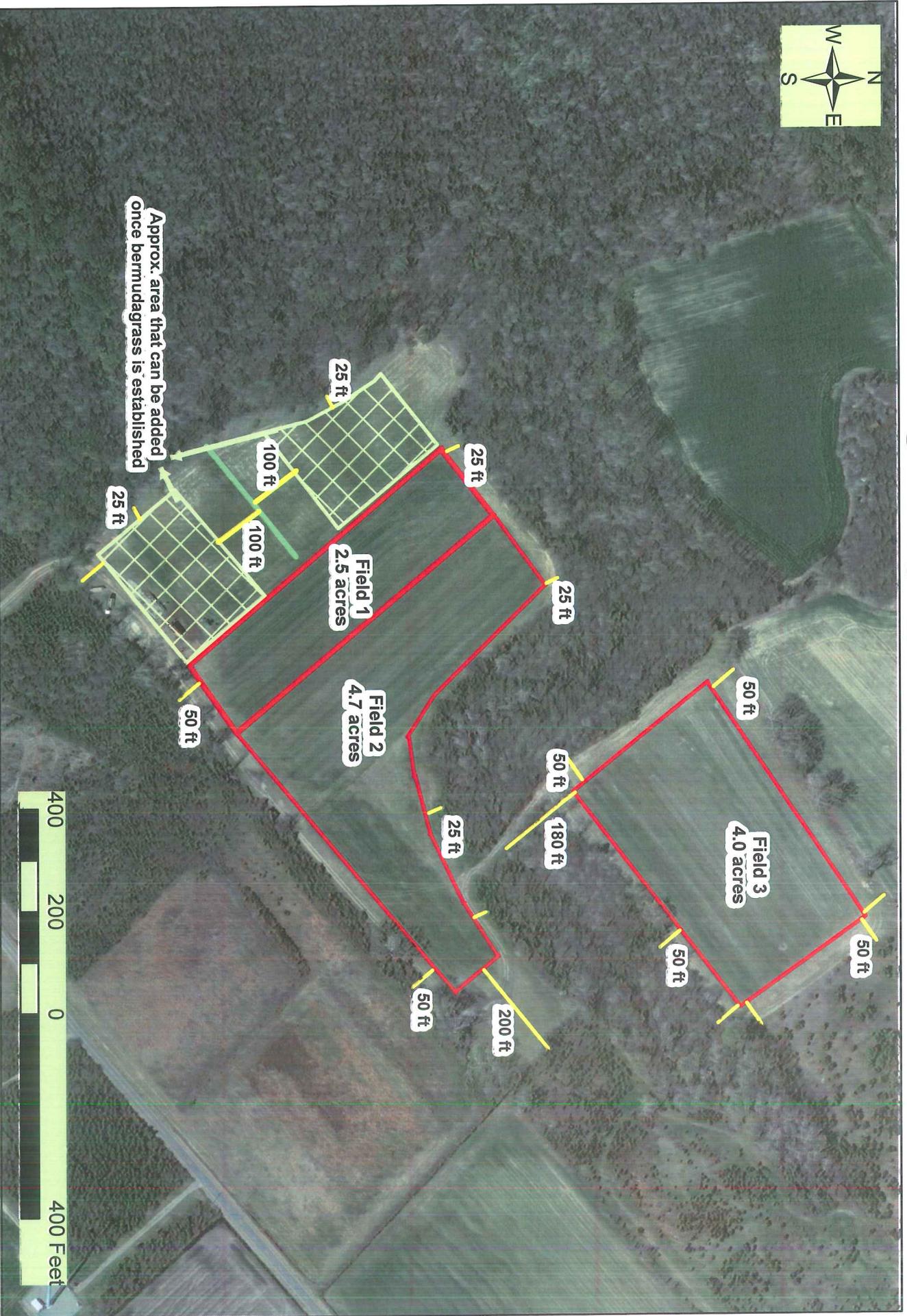
17. Any duly authorized officer, employee, or representative of the Division may, upon presentation of credentials, enter and inspect any property, premises, or place on or related to the disposal site and facility at any reasonable time for the purpose of determining compliance with this permit; may 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-27-18

- Atlantic Sewage Control
- Off of SR 1124
- Position: 36.197267° N latitude, -75.88223° E longitude

SLAS-27-18



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.



North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

John E. Skvarla, III
Secretary

August 27, 2014

Mr. J. Bryan Smith
Atlantic Sewage Control
PO Box 2560
Kitty Hawk, NC 27949

**RE: SLAS-27-18 Permit Renewal
Atlantic Sewage Control
SR 1124 in Currituck County**

Dear Mr. Smith:

The NC Division of Waste Management has reviewed your application for renewal of septage land application site permit, **SLAS-27-18**, in Currituck County. Your application has been approved in accordance with NC Septage Management Rules and your permit, **SLAS-27-18**, 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, 7, 15, 16, 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 7.** States that there are approximately **11.2 acres available at this site for land application of septage. The maximum annual application rate for this site is 100,000 gallons per acre per year for a total, maximum annual application of 1,120,000 gallons.** These rates along with the monthly rates listed in the nutrient management plan are not to be exceeded.
- **Condition 15.** This permit is set to expire on **April 1, 2019**. 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 16.** Along with the required land application records, documentation of crop removal is required.
- **Condition 20.** Any supplemental nitrogen added to the fields must be documented.

CONTINUE ON BACK

Mr. Smith
August 27, 2014
Page 2 of 2

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 permit or septage in general, please contact me at (919) 707-8283. When communicating to the Division about this permit, please refer to it as "SLAS-27-18"

Sincerely,



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

Enclosures

cc: Central Office
John Marvin Fisher; Landowner
Currituck County Health Department

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SLAS Permit Review

REVIEWED → 7/1/14

NEW RENEWAL

ISSUED: 3/2/12

Permit #: SLAS-27-18
 Application Received: 4/21/14

EMAZLED
4/16/14

MODIFICATION
 EXPIRES: 4/1/14

APPLICATION			
COMPLETE			
LANDOWNER AUTHORIZATION FORM			
5 YRS FROM 4/1/14			
MAPS			
ON FILE			
NUTRIENT MANAGEMENT PLAN			
Crops: <u>BERMUDAGRASS / SMALL GRAIN OVERSEED</u>			
<input checked="" type="checkbox"/> Planting:			
<input checked="" type="checkbox"/> 80% coverage (replanting guidelines):			
<input checked="" type="checkbox"/> Harvest:			
<input checked="" type="checkbox"/> Soil Erosion and Runoff Control Plan:			
Fields:	3	Acres:	13
		Maximum Annual Application Amount:	1,300,000 gal.
FIELD 1 → 4.5 ACRES		UPDATED ACRES 7-9-14	
FIELD 2 → 4.5 ACRES		FIELD 1 → 2.5 ACRES	
FIELD 3 → 4.0 ACRES		FIELD 2 → 4.7 ACRES	
ACRES PREVIOUSLY PERMITTED		FIELD 3 → 4.0 ACRES	
		11.2 ACRES	
RECORDS			
<input checked="" type="checkbox"/> Septage Land Application Log Cover Sheet			
<input type="checkbox"/> Overapplied			
- NEED pH RECORDS FOR APPLICATIONS FROM JULY 2012 THROUGH JAN. 2014			
COMPLIANCE ISSUES AND OTHER COMMENTS (NOV's and NOD's)			
- UPDATED LOGS SHOWING pH EMAZLED ON 7-24-14			
- NOD ISSUED ON 8-26-14 FOR LATE APPLICATION.			
- UPDATED GPS'D ON 7-9-14			
- COORDINATES: 36.19767° N, -75.88223° W			
- RECORDS SAVED ON S: DRIVE			

27-18

NMP 4/21/14

Hydraulic Rate Tables (Assume No Grazing) – Standard Plant Available Nitrogen (PAN) Rate is 2.64 lbs per 1,000 gallons

Table II. Hybrid Bermudagrass overseeded with Rye rotation highlighted as [redacted] in above Table I

Month	Crop	Rate (Gal./Ac.)	Hydraulic Cumulative Total (Gal./Ac.)	Nitrogen Rate (lbs./Ac.)	Nitrogen Cumulative Total (lbs.)
10,000 ✓	January	Rye	10,000	26.4 26.4	52.8
	February	Rye	0	0	52.8
	March	Rye	0	0 26.4	52.8
20,000 ✓	April	Rye	10,000	26.4 52.8	79.2 (Harvest Rye)
20,000	May	Bermuda	0	0	0
	June	Bermuda	30,000	79.2 79.2	79.2
30,000	July	Bermuda	0	0	79.2
	August	Bermuda	20,000	52.8 52.8	132
10,000	September	Bermuda	20,000	52.8 52.8	184.8
10,000	October	Rye	0	0	0 (Plant Rye)
	Nov	Rye	0	0	0
	Dec	Rye	10,000	26.4 26.4	26.4
		Annual Total Summary	100,000		264

Nitrogen Requirements = 5.4 Tons x 49 lbs N per ton = 264 lbs of Nitrogen per yr per acre
<http://nutrients.soil.ncsu.edu/yields/> (April '14)

Not on FERT CHART

- 4) Field 1, 2, & 3 will be established in Hybrid Bermuda Grass. To promote stand establishment the following steps will be taken the first year: Upon harvest of the Rye, a foliar herbicide will be immediately applied will the Bermuda grass is still in its dormant stage.
 - a) Areas that develop with less than 80 % groundcover will be re-seeded with a forage type Bermudagrass such as Cheyene at a rate of 6 – 8 lbs/ac (if broadcasted) or 5 – 7 lbs/ac (if drilled) in April through May.
- 5) Field 1, 2, & 3 will be overseeded with Rye at a rate of approximately 120 lbs per acre if broadcasted and 100 lbs per acre if drilled in October.

E. Application Method

The preceding information is based on septage being evenly applied over the entire permitted site by a pressurized vacuum truck or a hose cart on the surface.

F. Additional Fertility Requirements

Phosphorus and potassium will be added in accordance with the soil test results for the crops grown.

NOTE: If a septage analysis is available, the phosphorus fertilizer requirement can be reduced by accounting for the amount of phosphorus in the septage.

OR

Approximately 150 lbs/acre of 0-0-60 N-P-K fertilizer will need to be added to the land application area in March to maintain fertility levels.

The buffer areas will be fertilized with 200 lbs/acre of 20-5-20 N-P-K fertilizer to maintain production based on soil test results.

G. Intended Crop use

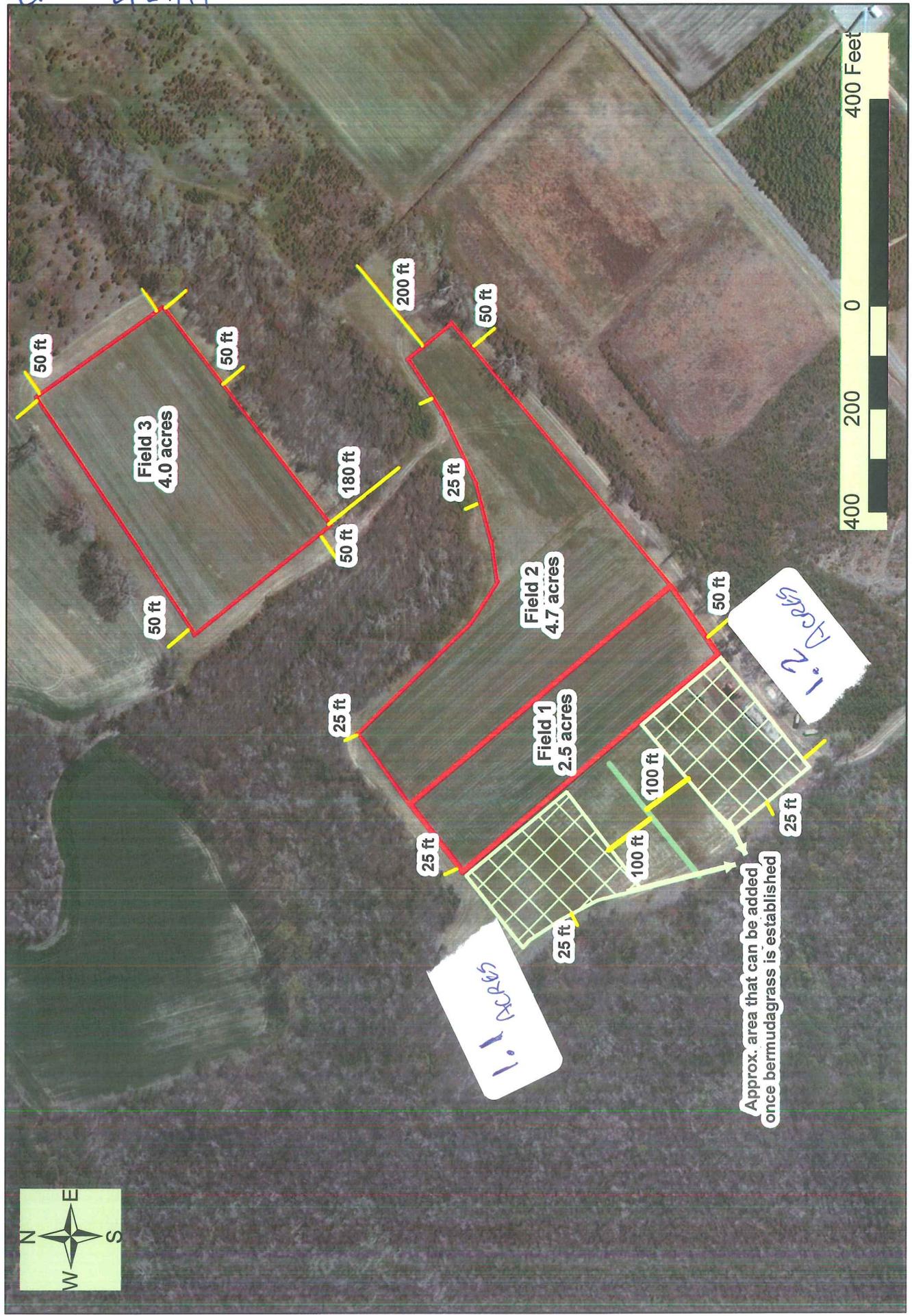
- 1) The hay will be sold to a local farmer to feed his beef cows and horses

DRAFT

SLAS-27-18

APPROX. 2 ACRES CAN BE ADDED WHEN CROPS ESTABLISHED

crc 8/27/14



Approx. area that can be added once bermudagrass is established

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.

Cobb, Chester

From: Cobb, Chester
Sent: Tuesday, December 17, 2013 10:28 AM
To: scarpenter@soilplus.net
Subject: Permit Renewal Notifications
Attachments: slas-27-16 & 17 & 18 & 20 notif_12-09-13.pdf

Scott,

I sent the attached letter last week to Bryan Smith concerning permits that will expire on April 1, 2014. The permit up for renewal are SLAS-27-16, SLAS-27-17, SLAS-27-18, and SLAS-27-20. The attached letter does not have the forms needed for permit renewal. I did mail the forms with the letter I sent to Bryan. If you want me to email you the forms, let me know.

Chester

Chester R. Cobb
Soil Scientist
Composting and Land Application Branch

MAILING ADDRESS: NC DENR, Division of Waste Management
1646 Mail Service Center, Raleigh, NC 27699-1646
PHYSICAL ADDRESS: Green Square Complex, 217 W. Jones Street, Raleigh, NC 27603
Phone & Fax: 919-707-8283
chester.cobb@ncdenr.gov
<http://portal.ncdenr.org/web/wm/sw>

*****E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties.*****

Cobb, Chester

From: scarpenter@soilplus.net
Sent: Tuesday, December 17, 2013 6:08 PM
To: Cobb, Chester
Subject: RE: Permit Renewal Notifications

Chester,

Jan emailed me the forms last week. I will start on these applications over Christmas. If I have questions I will email you.

Thanks

C. Scott Carpenter, LSS

Soil Plus, LLC
208 Williams St
Greenville, NC 27858

(252) 917-4288 (phone)
(800) 755-7153 (fax)

www.soilplus.net

CHECK OUT OUR NEW WEBSITE FOR PAN-P: www.PAN-P.com

scarpenter@soilplus.net

----- Original Message -----

Subject: Permit Renewal Notifications
From: "Cobb, Chester" <chester.cobb@ncdenr.gov>
Date: Tue, December 17, 2013 10:28 am
To: "scarpenter@soilplus.net" <scarpenter@soilplus.net>

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Chester

Chester R. Cobb
Soil Scientist
Composting and Land Application Branch

MAILING ADDRESS: NC DENR, Division of Waste Management
1646 Mail Service Center, Raleigh, NC 27699-1646
PHYSICAL ADDRESS: Green Square Complex, 217 W. Jones Street, Raleigh, NC 27603
Phone & Fax: 919-707-8283
chester.cobb@ncdenr.gov

<http://portal.ncdenr.org/web/wm/sw>

*****E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties.*****

SOIL PLUS

Meeting Your Nutrient Management Needs

Cobb, Chester

From: Cobb, Chester
Sent: Wednesday, March 26, 2014 2:47 PM
To: scarpenter@soilplus.net
Subject: Permit Renewals
Attachments: slas-27-16 & 17 & 18 & 20 notif_12-09-13.pdf

Scott,

I have not seen any paperwork concerning the permit renewals of the following permits:

SLAS-27-16
SLAS-27-17
SLAS-27-18
SLAS-27-20.

Those permits expire next week on 4/1/14. I have attached the letter that was sent out on 12/9/13. The required information as identified in the letter needs to be received by this office by 4/1/14. If you have any questions, please contact me.

Chester

Chester R. Cobb
Soil Scientist
Composting and Land Application Branch

MAILING ADDRESS: NC DENR, Division of Waste Management
1646 Mail Service Center, Raleigh, NC 27699-1646
PHYSICAL ADDRESS: Green Square Complex, 217 W. Jones Street, Raleigh, NC 27603
Phone & Fax: 919-707-8283
chester.cobb@ncdenr.gov
<http://portal.ncdenr.org/web/wm/sw>

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Cobb, Chester

From: Cobb, Chester
Sent: Thursday, March 27, 2014 8:47 AM
To: 'scarpenter@soilplus.net'
Subject: RE: Permit Renewals

Thanks, Scott. I just wanted to make sure that it had not been forgotten.

Chester

Chester R. Cobb
Soil Scientist
Composting and Land Application Branch

MAILING ADDRESS: NC DENR, Division of Waste Management
1646 Mail Service Center, Raleigh, NC 27699-1646
PHYSICAL ADDRESS: Green Square Complex, 217 W. Jones Street, Raleigh, NC 27603
Phone & Fax: 919-707-8283
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<http://portal.ncdenr.org/web/wm/sw>

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From: scarpenter@soilplus.net [<mailto:scarpenter@soilplus.net>]
Sent: Thursday, March 27, 2014 8:10 AM
To: Cobb, Chester
Subject: Re: Permit Renewals

Chester

We are completing those now. All the paper work has been done. We are just now compiling and putting them together.

Thanks

C. Scott Carpenter, LSS
Nutrient Management Planner

Soil Plus
208 Williams St
Greenville, NC 27858

252-917-4288
800-755-7153 (Fax)
Scarpenter@soilplus.net

On Mar 26, 2014, at 2:46 PM, "Cobb, Chester" <chester.cobb@ncdenr.gov> wrote:

Scott,

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SLAS-27-17

SLAS-27-18

SLAS-27-20.

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Chester

Chester R. Cobb

Soil Scientist

Composting and Land Application Branch

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<slas-27-16 & 17 & 18 & 20 notif_12-09-13.pdf>

Cobb, Chester

From: scarpenter@soilplus.net
Sent: Wednesday, April 16, 2014 6:39 AM
To: Cobb, Chester
Subject: 27-18 Application
Attachments: 27-18 Package.pdf

See attached...

C. Scott Carpenter, LSS

Soil Plus, LLC
208 Williams St
Greenville, NC 27858

(252) 917-4288 (phone)
(800) 755-7153 (fax)

www.soilplus.net

FTP Site: <https://soilplus.sharefile.com> (**NEW**)

CHECK OUT OUR NEW WEBSITE FOR PAN-P: www.PAN-P.com

scarpenter@soilplus.net

SOIL PLUS
Meeting Your Nutrient Management Needs

Site	Field	2012			Wet Basis		Dry Basis Est.		Site	Field	2013			Wet Basis		Dry Basis Est.	
		Size ac.	Hay Bales #	Weight tons	Yield tons/ac	Yield tons/ac	Yield tons/ac	Size ac.			Hay Bales #	Weight tons	Yield tons/ac	Yield tons/ac			
SLAS-27-16	1	14.5	116	58.0	4.0	3.2		SLAS-27-16	1	14.5	144	72.0	5.0	4.0			
SLAS-27-17	1	1.4	19	9.5	6.8	5.4		SLAS-27-17	1	1.4	28	14.0	10.0	8.0			
	2	3.9	31	15.5	4.0	3.2			2	3.9	33	16.5	4.2	3.4			
	Total	5.3	50	25.0	4.7	3.8			Total	5.3	61	30.5	5.8	4.6			
SLAS-27-18	1	2.5	59	29.5	11.8	9.4		SLAS-27-18	1	2.5	69	34.5	13.8	11.0			
	2	4.7	69	34.5	7.3	5.9			2	4.7	107	53.5	11.4	9.1			
	3	4	54	27.0	6.8	5.4			3	4	85	42.5	10.6	8.5			
	Total	11.2	182	91.0	8.1	6.5			Total	11.2	261	130.5	11.7	9.3			
SLAS-27-19	1	9.9	261	130.5	13.2	10.5		SLAS-27-19	1	9.9	273	136.5	13.8	11.0			
	2	9.3	234	117.0	12.6	10.1			2	9.3	246	123.0	13.2	10.6			
	Total	19.2	495	247.5	12.9	10.3			Total	19.2	519	259.5	13.5	10.8			
SLAS-27-20	1	4.3	123	61.5	14.3	11.4		SLAS-27-20	1	4.3	141	70.5	16.4	13.1			
	2	4.3	117	58.5	13.6	10.9			2	4.3	149	74.5	17.3	13.9			
	3	7.1	175	87.5	12.3	9.9			3	7.1	195	97.5	13.7	11.0			
	4	6.4	140	70.0	10.9	8.8			4	6.4	198	99.0	15.5	12.4			
	Total	22.1	555	277.5	12.6	10.0			Total	22.1	683	341.5	15.5	12.4			
SLAS-27-21	1	6.6	135	67.5	10.2	8.2		SLAS-27-21	1	6.6	163	81.5	12.3	9.9			
	2A	14.5	208	104.0	7.2	5.7			2A	14.5	231	115.5	8.0	6.4			
	2B	7.5	137	68.5	9.1	7.3			2B	7.5	242	121.0	16.1	12.9			
	3	2	43	21.5	10.8	8.6			3	2	0	0.0	0.0	0.0			
	Total	30.6	523	261.5	8.5	6.8			Total	30.6	636	318.0	10.4	8.3			
		* Average weight of 1 bale = approx. 1,000 lbs															
		* Dry weight yield estimate is 80% of wet weight yield															

			2012 Dry Basis									2013 Dry Basis						
Site	Field	Size ac.	Yield tows/ac	Applied Septage gal	lbs N/ac		Site	Field	Size ac.	Yield tows/ac	Applied Septage gal	lbs N/ac						
SLAS-27-16	1	14.5	3.2		-		SLAS-27-16	1	14.5	4.0	936,000	168						
SLAS-27-17	1	1.4	5.4		-		SLAS-27-17	1	1.4	8.0	72,000	134						
	2	3.9	3.2		-			2	3.9	3.4	228,000	152						
	Total	5.3	3.8		-			Total	5.3	4.6	300,000	147						
SLAS-27-18	1	2.5	9.4		-		SLAS-27-18	1	2.5	11.0	88,000	92						
	2	4.7	5.9		-			2	4.7	9.1	340,000	188						
	3	4	5.4		-			3	4	8.5	324,000	211						
	Total	11.2	6.5		-			Total	11.2	9.3	752,000	175						
SLAS-27-19	1	9.9	10.5		-		SLAS-27-19	1	9.9	11.0		-						
	2	9.3	10.1		-			2	9.3	10.6		-						
	Total	19.2	10.3		-			Total	19.2	10.8		-						
SLAS-27-20	1	4.3	11.4		-		SLAS-27-20	1	4.3	13.1	300,000	181						
	2	4.3	10.9		-			2	4.3	13.9	340,000	206						
	3	7.1	9.9		-			3	7.1	11.0	492,000	180						
	4	6.4	8.8		-			4	6.4	12.4	192,000	78						
	Total	22.1	10.0		-			Total	22.1	12.4	1,324,000	156						
SLAS-27-21	1	6.6	8.2		-		SLAS-27-21	1	6.6	9.9		-						
	2A	14.5	5.7		-			2A	14.5	6.4		-						
	2B	7.5	7.3		-			2B	7.5	12.9		-						
	3	2	8.6		-			3	2	0.0		-						
	Total	30.6	6.8		-			Total	30.6	8.3		-						

27-17				
1	6	13	19	2012
2	14	17	31	
27-16				
1	47	69	116	
27-19				
1	108	153	261	
2	97	137	234	
27-20				
1	51	72	123	
2	49	68	117	
3	81	94	175	
4	64	76	140	
27-21				
1	57	78	135	
2A	87	121	208	
2B	53	84	137	
3	17	26	43	
27-18				
1	20	39	59	
2	26	43	69	
3	23	31	54	
		Total	1921	
AVERAGE WEIGHT per Bale is AROUND 1000 lbs				

Field #	Sample	Flow	Year
27-17			2014
1	9		
2	16		
27-16			
1	49		
27-19			
1	97		
2	109		
27-20			
1	73		
2	69		
3	87		
4	93		
27-21			
1	68		
2A	89		
2B	104		
3	37		
27-18			
1	23		
2	31		
3	37		
		Total	

SLAS-27-18

Permit Application Checklist for a Septage Land Application Site

Steps for submitting an application

APPLICATION. Completely fill out both sides of the "Application for a Permit to Operate a Septage Land Application Site." Sign and date. Items II. 5 and 6 on page 2 need to be explained in detail.

LANDOWNER AUTHORIZATION. If someone else is on the deed beside the applicant, then a "Landowner's Authorization to Operate a Septage Land Application Site" form must be completed, signed by the landowner/s, and notarized. Be sure that the time frame is filled out correctly on the form. Use the appropriate landowner's authorization form depending on whether the property is own by individual/s, corporation, or limited liability company (LLC).

NUTRIENT MANAGEMENT PLAN / SOIL EROSION & RUNOFF CONTROL PLAN. Review the current nutrient management plan and the soil erosion and runoff control plan. If there are no changes, the site operator must re-sign and date the current plan. For changes, you must contact a technical specialist to modify your plan.

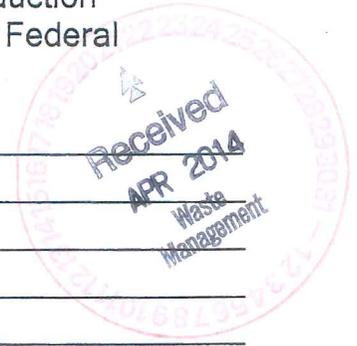
RECORDS AND SEPTAGE LAND APPLICATION LOG COVER SHEET. Submit a copy of your records documenting the land application events from JUNE 2012 to now. Records must show the date and time of application, type of septage, amount (gal.), field, and pH of septage. Also, complete the Septage Land Application Log Cover Sheet certifying that the septage was treated to meet pathogen and vector attraction reduction requirements prior to application as covered within the Code of Federal Regulations, 40 CFR Part 503.

OTHER. _____

COPY. Make copies of the documents for your records.

MAIL. Mail the ORIGINAL documents to:

Division of Waste Management
ATTN: Chester Cobb
1646 Mail Service Center
Raleigh, NC 27699-1646



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 Atlantic OBX, Inc. dba Atlantic Sewage Control
Address P.O. Box 2560
Kitty Hawk, NC 27949
Phone 252-255-2030

2. Contact person for site operation (if different from applicant): Sammy Smith
Title or position Site Manager Phone 252-255-2030
Address P.O. Box 2560
Kitty Hawk, NC 27949

3. Landowner John M. Fisher
Address P.O. Box 23
Jarvisburg, NC 27947

4. Site Location: County Currituck State Road Number 1118
Directions to site: U.S. Hwy 158 East to SR1124. SR1121 West on SR1118.
Farm is on right.

5. Indicate whether request is: new _____ renewal X modification _____

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

Existing site permit number: SLAS-27-18 permit expiration date: 04/01/2014

6. Number of acres meeting the requirements of the N.C. Septage Management Rules: 13.0 acres.

7. Substances other than septage or grease trap pumpings previously disposed of on the site:
(a) None X, 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-27-16 or Elizabeth City WWTP
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 X
5. Proposed treatment method of each type of septage to be land applied (use additional paper to explain if necessary): All septage, grease & toilet waste will be stabilized with lime prior to land application so that the pH will be >12.0 for at least 30 minutes for domestic septage and at least 2 hours for grease or grease/septage mixture.
6. Proposed method of applying septage to land, including septage distribution plan if required * (use additional paper to explain if necessary): By driving pumper truck equipped with spreader plates, air activated valves through field while evenly spreading material without creating pools at the ends of rows; also by use of hose reel continuously moving spray irrigation gun.
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): Since the site is agricultural, the Endangered Species Law does not apply.

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.

J. Bryan Smith
Signature***

4-16-14
Date

J. Bryan Smith
Print name

Owner/President
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.

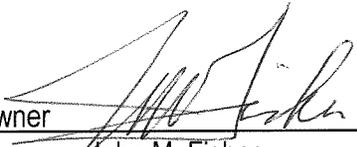
***Signature of company official required.

**Landowner's Authorization to Operate a Septage Land Application Site
SLAS 27-18**

North Carolina Department of Environment and Natural Resources
Division of Waste Management - Solid Waste Section
401 Oberlin Rd, Ste. 150, Raleigh, N.C. 27605



I, John M. Fisher (name of site owner) hereby certify that I am the owner of 13.0 acres of land located off SR1124, in Currituck Co. and identified by Deed Book 228, Page 160 _____ (book and page of recorded deed or tax map parcel) and that I agree to allow Atlantic OBX, Inc. dba Atlantic Sewage Control (J. Bryan Smith) (name of site operator) to use said land for septage land application site for a period of Five (5) Years (length of time), beginning April 1, 2014 (month, day and year) and that I have read the North Carolina Septage Management Rules *. I further understand that no septage may be stored or treated on the land until the Division of Waste Management has issued a permit for a detention or treatment facility. The above described property is owned solely by me or jointly with None (names of all co-owners, or state none).

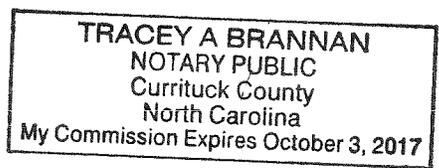
Signature of landowner  Date 12/30/13
John M. Fisher

Sworn to and subscribed before me this 30th day of December, 20 13.


(Notary Public)

(OFFICIAL SEAL)

My Commission expires: Oct. 3, 2017



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

** As required by Rule .0826

SEPTAGE LAND APPLICATION LOG

CERTIFICATION

Site Operator: Sammy Smith

SLAS Permit #: 27-20

Site Location: SR1146, Currituck County
(street address for the site or latitude and longitude)

Number of acres permitted: 22.0

Permitted application rate: 100,000 gallons per acre-year
(gallons septage per acre per year)

Crop(s): Bermuda Grass (summer)/Rye (winter)

Crop nitrogen requirement(s): 264
(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."


(signature)

2-22-14
(date)



**NUTRIENT MANAGEMENT PLAN FOR SLAS 27-18
SEPTAGE APPLICATIONS TO BERMUDA GRASS AND RYE**

A. General Information

- 1) Field 1 contains approximately 4.5 acres; Field 2 contains approximately 4.5 acres, and Field 3 contains approximately 4.0 acres. The attached copy of the aerial photograph for the site shows field boundaries and identifications.
- 2) The dominant soil series on the site is Conetoe in Fields 1, 2, & 3 (Currituck County).
- 3) 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).
- 4) All nitrogen recommendations for forages will be 75% of the realistic yield expectation nitrogen rate should the forage to be grazed.
- 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.

B. Crops to be grown and approximate planting times:

Table I. Crop rotation for each field per crop type

Field	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
1		No App/ Harvest Rye April 15 th				No App/Harvest Bermuda July 1 st		Harvest Bermuda Sept 1st / Plant Rye			No App	
2		No App/ Harvest Rye April 15 th				No App/Harvest Bermuda July 1 st		Harvest Bermuda Sept 1st / Plant Rye			No App	
3		No App/ Harvest Rye April 15 th				No App/Harvest Bermuda July 1 st		Harvest Bermuda Sept 1st / Plant Rye			No App	

1) FALL AND WINTER CROP (Hybrid Bermuda with Rye Rotation)

- a) Rye for Hay
- b) Planting time October 15th through November 1st
- c) Application starts Nov 1st
- d) 30 day "No Application" wait period before harvestings
- e) No applications in January through April 1st
- f) Harvested May 15th through June 1st

2) SPRING AND SUMMER CROP (Hybrid Bermuda with Rye Rotation)

- a) Hybrid Bermudagrass for Hay
- b) Growing season starts June 1st
- c) Application begins June 1st
- d) Cut and baled when grass is ~ 12 inches (approximately 3 cuttings)
- e) 30 day "No Application" wait period before harvestings
- f) Last application September 15th
- g) Last Harvest October 15th

3) CROP MANAGEMENT

- a) A broad based herbicide application shall be made just prior to the Bermuda Grass becoming active (Late March to Mid-April). During the growing season selective herbicide applications may be made to control the weed population and promote better grass stand. These summer applications will be made approximately 15 days after the last Septage Application and approximately 15 days prior to harvesting.



Hydraulic Rate Tables (Assume No Grazing) – Standard Plant Available Nitrogen (PAN) Rate is 2.64 lbs per 1,000 gallons

Table II. Hybrid Bermudagrass overseeded with Rye rotation highlighted as in above Table I

Month	Crop	Rate (Gal./Ac.)	Hydraulic Cumulative Total (Gal/Ac.)	Nitrogen Rate (lbs/Ac.)	Nitrogen Cumulative Total (lbs.)
January	Rye	10,000	10,000	26.4	52.8
February	Rye	0	10,000	0	52.8
March	Rye	0	10,000	0	52.8
April	Rye	10,000	20,000	26.4	79.2 (Harvest Rye)
May	Bermuda	0	20,000	0	0
June	Bermuda	30,000	50,000	79.2	79.2
July	Bermuda	0	50,000	0	79.2
August	Bermuda	20,000	70,000	52.8	132
September	Bermuda	20,000	90,000	52.8	184.8
October	Rye	0	90,000	0	0 (Plant Rye)
Nov	Rye	0	90,000	0	0
Dec	Rye	10,000	100,000	26.4	26.4
		Annual Total Summary	100,000		264

Nitrogen Requirements = 5.4 Tons x 49 lbs N per ton = 264 lbs of Nitrogen per yr per acre
<http://nutrients.soil.ncsu.edu/yields/> (April '14)

- 4) Field 1, 2, & 3 will be established in Hybrid Bermuda Grass. To promote stand establishment the following steps will be taken the first year: Upon harvest of the Rye, a foliar herbicide will be immediately applied will the Bermuda grass is still in its dormant stage.
 - a) Areas that develop with less than 80% groundcover will be re-seeded with a forage type Bermudagrass such as Cheyene at a rate of 6 – 8 lbs/ac (if broadcasted) or 5 – 7 lbs/ac (if drilled) in April through May.
- 5) Field 1, 2, & 3 will be overseeded with Rye at a rate of approximately 120 lbs per acre if broadcasted and 100 lbs per acre if drilled in October.

E. Application Method

The preceding information is based on septage being evenly applied over the entire permitted site by a pressurized vacuum truck or a hose cart on the surface.

F. Additional Fertility Requirements

Phosphorus and potassium will be added in accordance with the soil test results for the crops grown.

NOTE: If a septage analysis is available, the phosphorus fertilizer requirement can be reduced by accounting for the amount of phosphorus in the septage.

OR

Approximately 150 lbs/acre of 0-0-60 N-P-K fertilizer will need to be added to the land application area in March to maintain fertility levels.

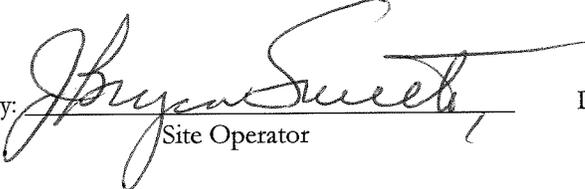
The buffer areas will be fertilized with 200 lbs/acre of 20-5-20 N-P-K fertilizer to maintain production based on soil test results.

G. Intended Crop use

- 1) The hay will be sold to a local farmer to feed his beef cows and horses

SOIL EROSION AND RUNOFF CONTROL PLAN

Given that slopes on this site do not exceed five percent, a 50 foot buffer, planted in Bermuda grass and rye, should suffice to prevent septage waste from migrating off of the fields. (More severe site conditions could require that soil erosion structures be installed before septage can be applied).

Submitted by:  Date: 4-16-14
Site Operator

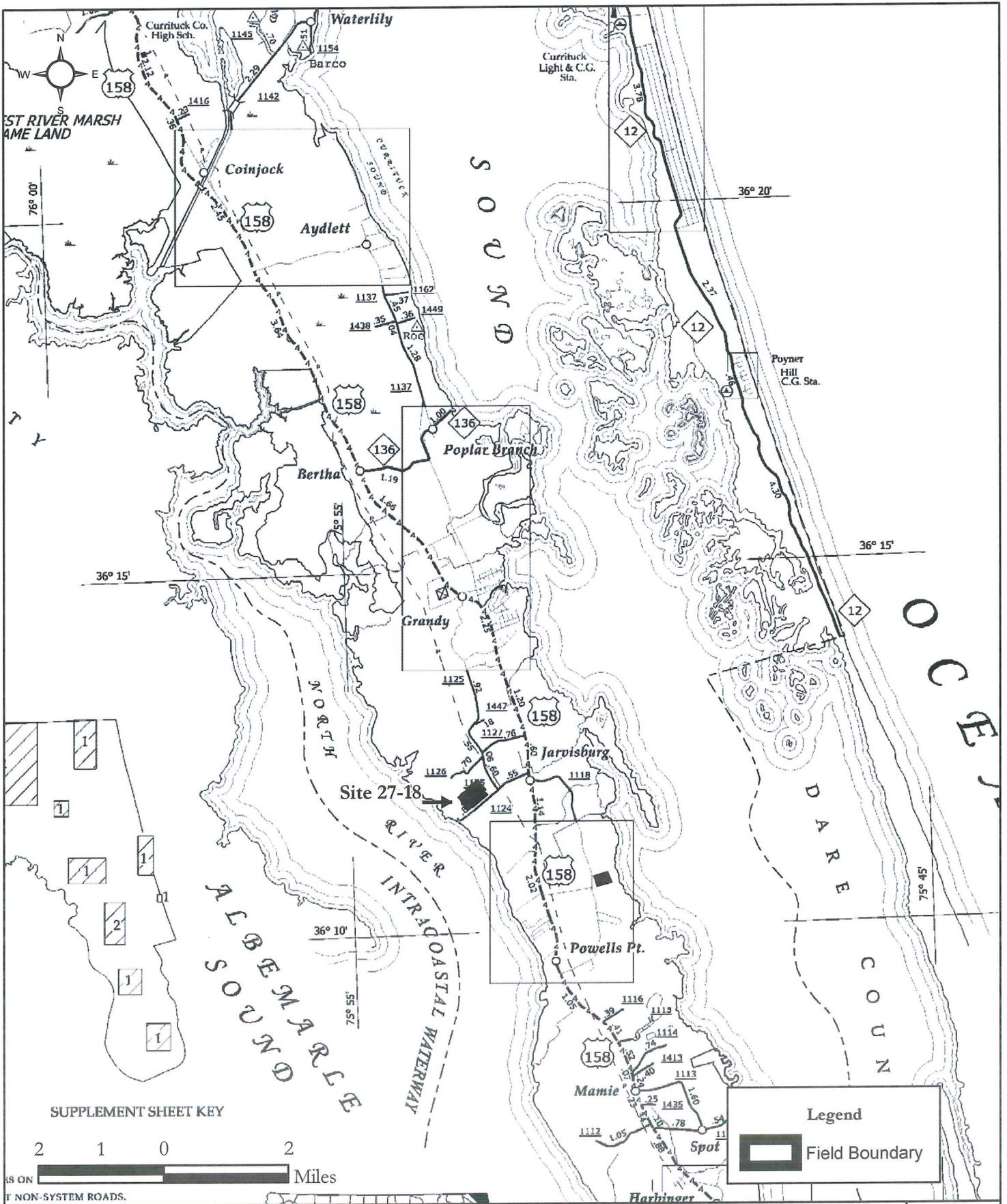
Plan prepared by: C. Scott Carpenter (TSP-09-6152)

Date: 04/15/2014

Address: 208 Williams Street
Greenville, NC 27858

Phone: (252) 917-4288

Received
APR 2014
Waste
Management



Scale: 1 inch equals 2 miles

Drawn by: CSC

Reviewed by:

Date: January '12



SLAS 27-18 LOCATION MAP

Permit Renewal

Powells Point, North Carolina

Soil Plus Project # 201007.A13

Figure

1



Scale: 1 inch equals 300 feet
 Drawn by: CSC
 Reviewed by:
 Date: January '12



SLAS 27-18 FIELD MAP
 Permit Renewal
 Powells Point, North Carolina
 Soil Plus Project # 201007.A13

Figure
 2