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

PERMIT TO OPERATE A SEPTAGE LAND APPLICATION SITE

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

is hereby issued a permit to operate a Septage Land Application Site with permit # **SLAS-27-17** located on SR 1118 in Currituck County at approximate position 36.16944° N latitude and -75.84528° W longitude. The site is to be operated in accordance with 15A NCAC 13B .0800 Septage Management, the information stated in the approved application, and the conditions of this permit. The unauthorized disposal of any liquid or solid wastes other than those specified in the conditions of this permit will be considered a violation of the conditions of this permit. Failure to comply with the conditions of this permit may result in permit suspension, permit revocation, action for injunctive relief, administrative penalties, or other remedies as provided in G.S. 130A, Article 1., Part 2.

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

Date Issued 6/27/2012

Martin A. Gallagher

Martin A. Gallagher, Branch Head
Solid Waste Section

Permit Conditions:

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 This permit shall become void if the soils fail to adequately assimilate the septage and shall be rescinded unless the site is maintained and operated in a manner which will protect the assigned water quality standards of the surface waters and ground waters.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 4.5 acre site has been established in Coastal Bermudagrass and shall be divided into Field 1 (1.5 acres) and Field 2 (3.0 acres). If the bermudagrass stand falls below 80%, the damaged areas shall be replanted 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 during April through May. The rye shall be planted on each field during October of each year at a rate of 120 lbs/ac if broadcasted or 100 lbs/ac if drilled. The bermudagrass shall be cut as hay and baled whenever it reaches approximately 12 inches in height, or roughly every 6 to 8 weeks beginning in June for approximately 3 harvests each year. The rye shall be cut as hay and baled in April of each year. The 30-day withdrawal period prior to harvest will be met by alternating septage applications to other permitted sites. All discharges shall be at locations on the site consistent with the crop rotation in the approved plan.

3. This site shall be operated and maintained in accordance with the erosion and runoff control plan submitted by Atlantic Sewage Control in such a manner as to prevent the migration of wastes off of the designated waste receiving site. A 25-foot buffer of bermuda and rye 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 wells shall be required as deemed necessary by the Division.

4. The issuance of this permit does not preclude the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other local, state, and federal government agencies which have jurisdiction. It is the responsibility of the Permittee to be in compliance with the Federal Regulations listed in the Code of Federal Regulations, 40 CFR Part 503.

5. This permit may be modified or reissued at any time to incorporate any conditions, limitations and/or monitoring requirements the Division deems necessary to adequately protect the environment and public health.

6. This site is only permitted for the land application of domestic septage, grease septage, 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. Grease septage and domestic septage shall be at pH 12 when land applied.

7. **This site contains approximately 4.5 acres that are available for the land application of septage.** The maximum annual application rate shall be 100,000 gallons per acre per year. Of the 100,000 gal/ac/yr, the rye may receive up to 30,000 gal/ac/yr. The bermudagrass may receive up to 70,000 gal/ac/yr. Monthly application rates shall be followed as outlined in the approved nutrient management plan. The maximum annual application amount for this site is 450,000 gallons. This application rate assumes equal septage distribution, on an annual basis, over the permitted area.

8. An approved above ground septage detention system with a minimum design capacity of 9,000 gallons shall be available prior to operation of this site unless an approved wastewater treatment plant is available for use during periods of adverse weather. The storage capacity may be adjusted if it is demonstrated during the operation of the site that this volume of storage is inappropriate.

9. Only the area designated on the attached site map(s) shall be utilized for septage disposal. Uniform coverage of septage across the permitted fields shall be obtained through the use of a hard hose traveler irrigation system and pump truck. Septage shall be distributed evenly within the permitted boundaries in such a manner that there is no standing water when the discharge is complete. Applications from a stationary irrigation gun can result in standing water, runoff, and over application of nutrients. Therefore, the speed of the irrigation gun is crucial in maintaining agronomic and hydraulic loading rates for the site. Any spray drifts from the application events must be contained within the permitted area. High winds can lead to drift and uneven land application across the permitted area. The site operator must monitor wind velocity and direction while applying septage.

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 void 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, 2014.** Modifications, when necessary, shall be made in accordance with the rules in effect at the time of renewal. An application for permit renewal shall be submitted at least ninety (90) days prior to the permit renewal date. A septage application log for the period of time this permit was valid shall be submitted along with an application for permit renewal or modification. The information required in the log is described in Rule 15A NCAC 13B .0838 (e) (1) of the NC Septage Management Rules and the Code of Federal Regulations, 40 CFR Part 503.17 (b).

16. Records shall be kept in accordance with 40 CFR 503.17(b). These records shall be made available to a representative of the Division upon request.

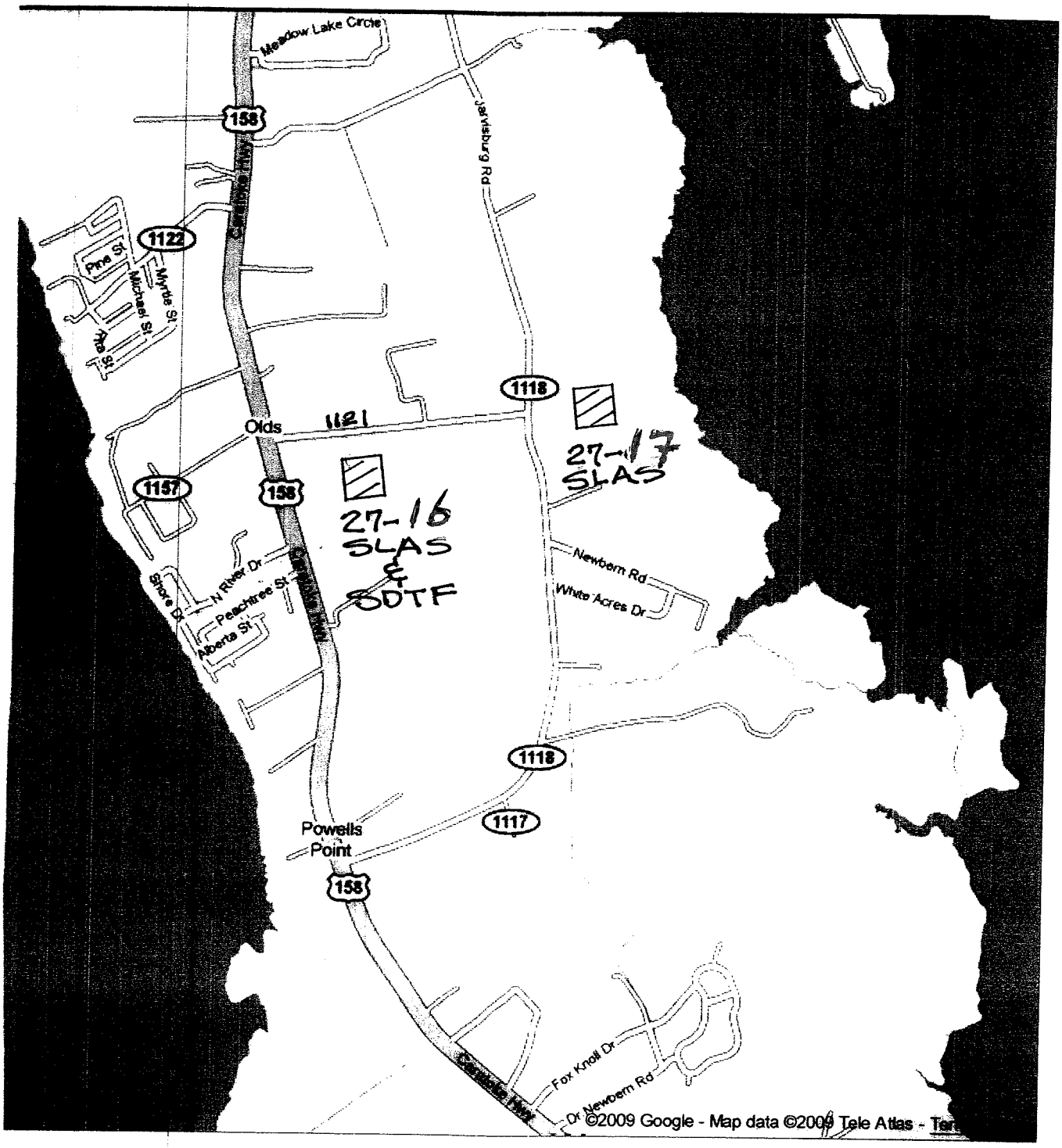
17. Any duly authorized officer, employee, or representative of the Division may, upon presentation of credentials, enter and inspect any property, premises, or place on or related to the disposal site and facility at any reasonable time for the purpose of determining compliance with this permit; may inspect or copy any records that must be kept under the conditions of this permit; or may obtain samples of groundwater, surface water, or leachate.

18. Field separations in the nutrient management plan and all pertinent setbacks shall be clearly located on the site. Boundaries of the permitted septage land application fields shall be clearly marked on the ground.

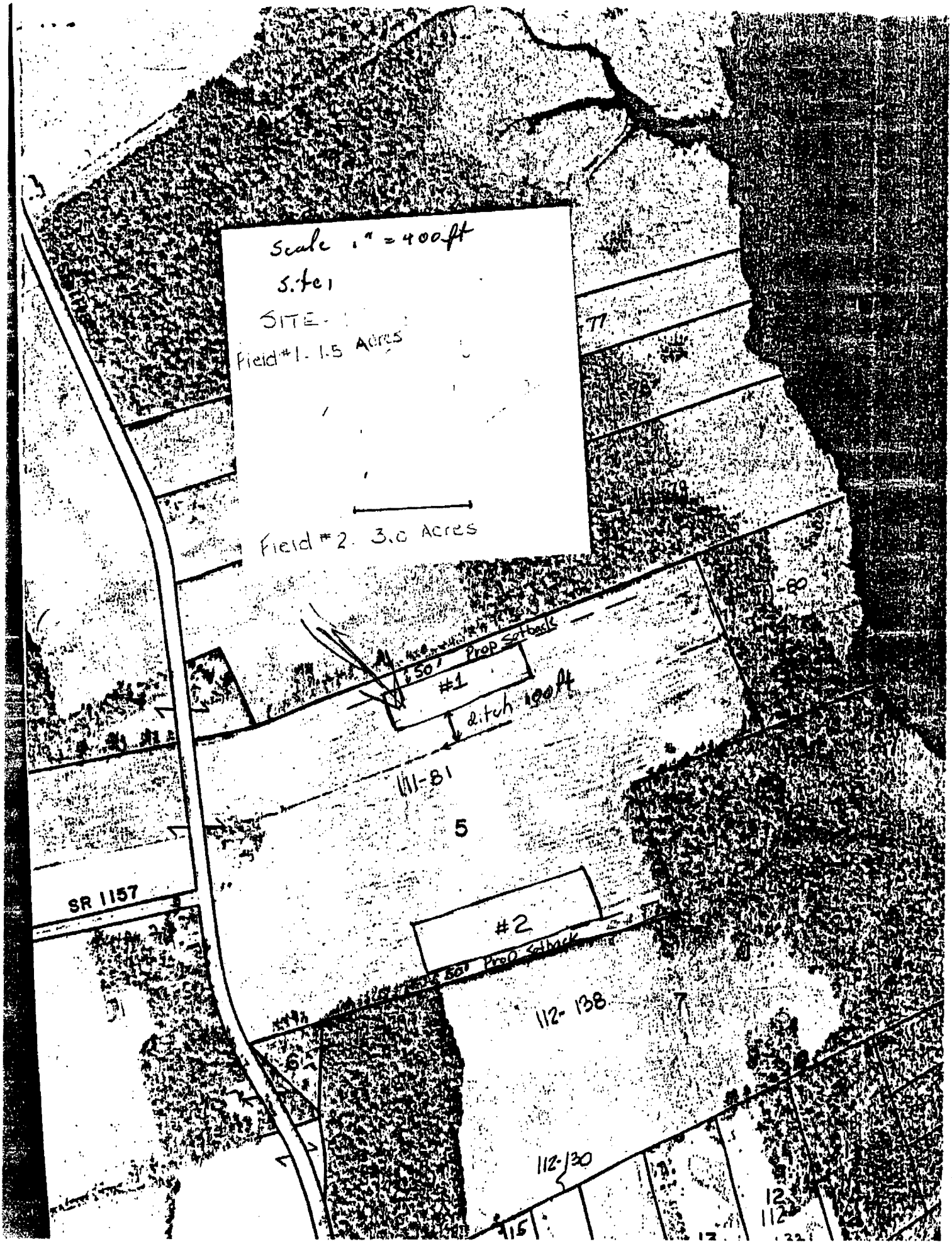
19. The areas that can be used for land application of septage shall be maintained at least 500 feet from any existing wells, residences, places of business, or places of public assembly. Septage shall not be disposed of within 50 feet of any property line or within 100 feet of any ditch. Spray drift must also be contained within the appropriate setbacks.

20. The total nitrogen applied to the fields shall not exceed the recommended nitrogen amount needed to obtain the realistic yield expectation for the specific crop on the dominant soil series of that field. The total nitrogen amount shall include the plant available nitrogen supplied from septage applications up to a maximum five year mineralization period and any supplemental inorganic nitrogen additions for that year.

21. **Yield estimates 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. A copy of the nutritive analysis for the harvested hay, the measured hay weights, and the calculated total harvest weight shall be submitted to the Solid Waste Section after each harvest.**



SCALE:	1" = 1 mile +/-	**ATLANTIC OBX, Inc.**	SITE LOCATION MAP **SLAS 27-01 & 02 & SDTF-02** CURRITUCK COUNTY, NC	MAP 1
CHECKED BY:		**ATLANTIC SEWAGE CONTROL**		
DRAWN BY:	CGL	**OUTER BANKS SEPTIC SERVICES**		
DATE:	May-09	Kitty Hawk, NC - 252-255-2030		


Scale 1" = 400ft
S.Fe1
SITE
Field #1 1.5 Acres
Field #2 3.0 Acres
Prop Setback
50'
#1
ditch 100ft
111-81
5
SR 1157
#2
50' Prop Setback
112-138
112-130
77
80

North Carolina Department of Environment and Natural Resources
Division of Waste Management
Dexter R. Matthews
Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

July 5, 2012

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

RE: SLAS-27-17 Permit Renewal
Atlantic Sewage Control
SR 1118 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-27-17**, in Currituck County. Your application has been approved in accordance with NC Septage Management Rules and your permit, **SLAS-27-17**, is enclosed. Please read all permit conditions carefully. The nutrient management and soil erosion and runoff control plans you submitted have been incorporated into your permit. In particular, pay close attention to **Permit Conditions 2, 6, 7, 10, 11, 12, 15, and 24**. The following is a summation of those Conditions.

- **Condition 2.** This condition lists the acres of the fields and incorporates crop management details listed in the submitted nutrient management plan.
- **Condition 6.** States that this site is only permitted to receive domestic septage, grease septage, 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.** Disposal of any other type of septage or waste at this site is prohibited.
- **Condition 7.** States that there are approximately 4.5 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 450,000 gallons.** These rates along with the monthly rates listed in the nutrient management plan are not to be exceeded.
- **Condition 10.** Septage shall only be applied when soil and weather conditions are favorable for application.
- **Condition 11.** Soil conditions must be monitored such that any septage application will not result in ruts greater than three inches in the soil surface.

CONTINUE ON BACK

- **Condition 12.** Any discharge, including aerial drift, of septage outside of the permitted boundaries is prohibited.
- **Condition 15. This permit is set to expire on April 1, 2014.** Ninety (90) days prior to the expiration of your permit, you must submit an application for permit renewal along with your septage land application logs for the entire time your current permit was valid.
- **Condition 21.** This condition requires certain monitoring of each harvest. The information collected must be submitted to the Division after each harvest.

Again, please pay close attention to all of the conditions within the enclosed permit. Remember that violations to the NC Septage Management Rules or this permit could subject you to administrative penalties of up to $15,000 per violation per day. If you have any questions concerning your permits or septage in general, please do not hesitate to contact me at (919) 707-8283. When communicating to the Division about this permit, please refer to it as **"SLAS-27-17"**

Sincerely,

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

Enclosures
cc: Central Office
Finley S. Newbern & H.D. Newbern, Jr.
Currituck County Health Department

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ATLANTIC OBX, INC.

ATLANTIC SEWAGE CONTROL
OUTER BANKS SEPTIC SERVICES
POST OFFICE BOX 2560
KITTY HAWK, N.C. 27949

Telephone (252) 255-2030
Fax (252) 255-0702

June 14, 2012

Mr. Chester Cobb
NCDENR – DWM
1646 Mail Service Center
Raleigh, NC 27699-1646

Re: Permit Application
SLAS-27-17

Dear Mr. Cobb:

Enclosed is the Application for a Permit to Operate a Septage Land Application Site for SLAS-27-17, under the operations of Atlantic Sewage Control. It is my understanding that you will be in a position to immediately issue the permit for this site upon receipt of this document. If my information is incorrect, please let me know.

Should you have any questions, please feel free to contact me at (252) 255-2030 or at sammy@atlanticsewage.com.

Respectfully,

Sammy O. Smith
Field Manager

SOS/jve

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
401 Oberlin Rd., Ste. 150, Raleigh, N.C. 27605

I. Site and Operator Information

1. Applicant Atlantic Sewage Control
   Address PO 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 Atlantic Sewage Control
   P.O. Box 2560
   Kitty Hawk, NC 27949

3. Landowner Finley S. Newbern & H.D. Newbern, Jr.
   Address PO Box 189
   Powells Point, NC 27966

4. Site Location: County: Currituck State Road Number 1118
   Directions to site: US 158 East to SR1121 East to SR1118 left and path is immediately on right.

5. Indicate whether request is: new _____ renewal X modification _____
   (Name Change Only)
   For a permit renewal or modification, provide the following information:
   Existing site permit number: SLAS-27-17 permit expiration date: 12/30/2011

6. Number of acres meeting the requirements of the N.C. Septage Management Rules: 4.5 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 pumping 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, airactivated valves through field with evenly spreading material without overlaps and 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***

6-13-12
Date

J. Bryan Smith
Print name

Owner
Title

Note: This application will not be reviewed until all parts of the application are complete.
*** Refer to Section .0821(e) of the N.C. Septage Management Rules.**
**** Refer to Section .0821(g) of the N.C. Septage Management Rules.**
*****Signature of company official required.**

ATLANTIC OBX SEPTAGE/GREASE MASTER SPREADING & HARVESTING SCHEDULE (REV. JUNE '12)

Site	Field	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
27-16	1												
27-17	1	No App		No App/ Harvest Rye April 15th		No App/ Harvest Bermuda June 15st	15 Days	No App/Harvest Bermuda Aug 15th	15 Days	Harvest Bermuda Oct 15th / Plant Rye			
	2	No App		No App/ Harvest Rye April 15th		No App/ Harvest Bermuda June 15st	15 Days	No App/Harvest Bermuda Aug 15th	15 Days	Harvest Bermuda Oct 15th / Plant Rye			
27-18	1		No App/ Harvest Rye April 15th			No App/Harvest Bermuda July 1st	15 Days	Harvest Bermuda Sept 1st/Plant Rye				No App	
	2		No App/ Harvest Rye April 15th			No App/Harvest Bermuda July 1st	15 Days	Harvest Bermuda Sept 1st/Plant Rye				No App	
	3		No App/ Harvest Rye April 15th			No App/Harvest Bermuda July 1st	15 Days	Harvest Bermuda Sept 1st/Plant Rye				No App	
27-19	1	No App			15 Days	No App/ Harvest Rye May 15th		No App/ Harvest Bermuda Aug 1st		Harvest Bermuda/Plant Rye Oct 15th			
	2	No App			15 Days	No App/ Harvest Rye May 15th		No App/ Harvest Bermuda Aug 1st		Harvest Bermuda/Plant Rye Oct 15th			
27-20	1		No App		15 Days	No App/ Harvest Rye May 15th		No App/ Harvest Bermuda Aug 1st		Harvest Bermuda/Plant Rye Oct 15th			
	2		No App		15 Days	No App/ Harvest Rye May 15th		No App/ Harvest Bermuda Aug 1st		Harvest Bermuda/Plant Rye Oct 15th			
	3		No App		15 Days	No App/ Harvest Rye May 15th		No App/ Harvest Bermuda Aug 1st		Harvest Bermuda/Plant Rye Oct 15th			
	4	No App				Harvest Rye/ Plant Millet June 1st	Start Applying June 15th	No App/Harvest Millet August 15th	15 Days	Harvest Millet/ Plant Rye Oct 15th			
27-21	1	No App		No App/ Harvest Rye May 1st	15 Days		No App/ Harvest Bermuda July 1st		Harvest Bermuda Sept 15th/Plant Rye			No App	
	2A	No App		No App/ Harvest Rye May 1st	15 Days		No App/ Harvest Bermuda July 1st		Harvest Bermuda Sept 15th/Plant Rye			No App	
	2B	No App				Harvest Rye/ Plant Millet June 1st	Start Applying June 15th	No App/Harvest Millet August 15th	15 Days	Harvest Millet/Plant Rye Oct 15th			No App
	3	No App		No App/ Harvest Rye May 1st	15 Days		No App/ Harvest Bermuda July 1st		Harvest Bermuda Sept 15th/Plant Rye			No App	

Site	Field	Jan (Gal/Ac.)		Feb (Gal/Ac.)		March (Gal/Ac.)		April (Gal/Ac.)		May (Gal/Ac.)		June (Gal/Ac.)		July (Gal/Ac.)		Aug (Gal/Ac.)		Sept (Gal/Ac.)		Oct (Gal/Ac.)		Nov. (Gal/Ac.)		Dec. (Gal/Ac.)		Total (Gal/Ac./Yr.)	
		Rate	Cumu	Rate	Cumu	Rate	Cumu	Rate	Cumu	Rate	Cumu	Rate	Cumu	Rate	Cumu	Rate	Cumu	Rate	Cumu	Rate	Cumu	Rate	Cumu	Rate	Cumu	Rate	Cumm
27-16	1																										
27-17	1	NA	0	10,000	10,000	NA	10,000	10,000	20,000	15,000	35,000	NA	35,000	25,000	60,000	NA	60,000	20,000	80,000	NA	80,000	10,000	90,000	10,000	100,000	**100,000**	**100,000**
	2	NA	0	10,000	10,000	NA	10,000	10,000	20,000	15,000	35,000	NA	35,000	25,000	60,000	NA	60,000	20,000	80,000	NA	80,000	10,000	90,000	10,000	100,000	**100,000**	**100,000**
27-18	1	10,000	10,000	NA	10,000	NA	10,000	20,000	30,000	20,000	50,000	NA	50,000	30,000	80,000	NA	80,000	10,000	90,000	10,000	100,000	NA	100,000	NA	100,000	**100,000**	**100,000**
	2	10,000	10,000	NA	10,000	NA	10,000	20,000	30,000	20,000	50,000	NA	50,000	30,000	80,000	NA	80,000	10,000	90,000	10,000	100,000	NA	100,000	NA	100,000	**100,000**	**100,000**
	3	10,000	10,000	NA	10,000	NA	10,000	20,000	30,000	20,000	50,000	NA	50,000	30,000	80,000	NA	80,000	10,000	90,000	10,000	100,000	NA	100,000	NA	100,000	**100,000**	**100,000**
27-19	1	NA	0	NA	0	NA	0	10,000	10,000	NA	10,000	30,000	40,000	NA	40,000	20,000	60,000	20,000	80,000	NA	80,000	10,000	90,000	10,000	100,000	**100,000**	**100,000**
	2	NA	0	NA	0	NA	0	10,000	10,000	NA	10,000	30,000	40,000	NA	40,000	20,000	60,000	20,000	80,000	NA	80,000	10,000	90,000	10,000	100,000	**100,000**	**100,000**
27-20	1	10,000	10,000	NA	10,000	NA	10,000	10,000	20,000	NA	20,000	30,000	50,000	NA	50,000	20,000	70,000	20,000	90,000	NA	90,000	NA	90,000	10,000	100,000	**100,000**	**100,000**
	2	10,000	10,000	NA	10,000	NA	10,000	10,000	20,000	NA	20,000	30,000	50,000	NA	50,000	20,000	70,000	20,000	90,000	NA	90,000	NA	90,000	10,000	100,000	**100,000**	**100,000**
	3	10,000	10,000	NA	10,000	NA	10,000	10,000	20,000	NA	20,000	30,000	50,000	NA	50,000	20,000	70,000	20,000	90,000	NA	90,000	NA	90,000	10,000	100,000	**100,000**	**100,000**
	4	NA	0	NA	0	10,000	10,000	10,000	20,000	NA	20,000	30,000	50,000	30,000	80,000	NA	80,000	10,000	90,000	NA	90,000	NA	90,000	10,000	100,000	**100,000**	**100,000**
27-21	1	NA	0	10,000	10,000	10,000	20,000	NA	20,000	15,000	35,000	NA	35,000	30,000	65,000	25,000	90,000	NA	90,000	10,000	100,000	NA	100,000	NA	100,000	**100,000**	**100,000**
	2A	NA	0	10,000	10,000	10,000	20,000	NA	20,000	15,000	35,000	NA	35,000	30,000	65,000	25,000	90,000	NA	90,000	10,000	100,000	NA	100,000	NA	100,000	**100,000**	**100,000**
	2B	NA	0	NA	0	10,000	10,000	10,000	20,000	NA	20,000	15,000	35,000	30,000	65,000	NA	65,000	25,000	90,000	NA	90,000	10,000	100,000	NA	100,000	**100,000**	**100,000**
	3	NA	0	10,000	10,000	10,000	20,000	NA	20,000	15,000	35,000	NA	35,000	30,000	65,000	25,000	90,000	NA	90,000	10,000	100,000	NA	100,000	NA	100,000	**100,000**	**100,000**
Monthly Available Total Volume (Gal/Ac.)		**80,000**		**80,000**		**80,000**		**115,000**		**185,000**		**165,000**		**180,000**		**160,000**		**95,000**		**170,000**		**120,000**		**70,000**			

Site	Field	Jan (Total Gal)		Feb (Total Gal)		March (Total Gal)		April (Total Gal)		May (Total Gal)		June (Total Gal)		July (Total Gal)		Aug (Total Gal)		Sept (Total Gal)		Oct (Total Gal)		Nov. (Total Gal)		Dec. (Total Gal)		Total (Total Gal/Yr.)
		Rate	Cumu	Rate	Cumu	Rate	Cumu	Rate	Cumu	Rate	Cumu	Rate	Cumu	Rate	Cumu	Rate	Cumu	Rate	Cumu	Rate	Cumu	Rate	Cumu	Rate	Cumu	Cumulative
27-16	1																									
27-17	1 (1.5 Ac.)	NA	0	10,000	15,000	NA	0	10,000	15,000	15,000	22,500	NA	0	25,000	375,00	NA	0	20,000	30000	NA	0	10,000	15,000	10,000	15,000	150,000
	2 (3.0 Ac.)	NA	0	10,000	30,000	NA	0	10,000	30,000	15,000	45,000	NA	0	25,000	75,000	NA	0	20,000	60000	NA	0	10,000	30,000	10,000	30,000	300,000
27-18	1 (4.5Ac.)	10,000	45,000	NA	0	NA	0	20,000	90,000	20,000	90,000	NA	0	30,000	135,000	NA	0	10,000	45000	10,000	45,000	NA	0	NA	0	450,000
	2 (4.5 Ac.)	10,000	45,000	NA	0	NA	0	20,000	90,000	20,000	90,000	NA	0	30,000	135,000	NA	0	10,000	45000	10,000	45,000	NA	0	NA	0	450,000
	3 (4.0 Ac.)	10,000	40,000	NA	0	NA	0	20,000	80,000	20,000	80,000	NA	0	30,000	120,000	NA	0	10,000	40000	10,000	40,000	NA	0	NA	0	400,000
27-19	1 (9.9 Ac.)	NA	0	NA	0	NA	0	10,000	99,000	NA	0	30,000	297,000	NA	0	20,000	198,000	20,000	198000	NA	0	10,000	99,000	10,000	99,000	990,000
	2 (9.3 Ac.)	NA	0	NA	0	NA	0	10,000	93,000	NA	0	30,000	279,000	NA	0	20,000	186,000	20,000	186000	NA	0	10,000	93,000	10,000	93,000	930,000
27-20	1 (4.3 Ac)	10,000	43,000	NA	0	NA	0	10,000	43,000	NA	0	30,000	129,000	NA	0	20,000	86,000	20,000	86000	NA	0	NA	0	10,000	43,000	430,000
	2 (4.3 Ac.)	10,000	43,000	NA	0	NA	0	10,000	43,000	NA	0	30,000	129,000	NA	0	20,000	86,000	20,000	86000	NA	0	NA	0	10,000	43,000	430,000
	3 (7.1 Ac.)	10,000	71,000	NA	0	NA	0	10,000	71,000	NA	0	30,000	213,000	NA	0	20,000	142,000	20,000	142000	NA	0	NA	0	10,000	71,000	710,000
	4 (6.4 Ac.)	NA	0	NA	0	10,000	64,000	10,000	64,000	NA	0	30,000	192,000	30,000	192,000	NA	0	10,000	64000	NA	0	NA	0	10,000	64,000	640,000
27-21	1 (6.6 Ac.)	NA	0	10,000	66,000	10,000	66,000	NA	0	15,000	99,000	NA	0	30,000	198,000	25,000	165,000	NA	0	10,000	66,000	NA	0	NA	0	660,000
	2A (14.5 Ac.)	NA	0	10,000	145,000	10,000	145,000	NA	0	15,000	217,500	NA	0	30,000	435,000	25,000	362,500	NA	0	10,000	145,000	NA	0	NA	0	1,450,000
	2B (7.5 Ac.)	NA	0	NA	0	10,000	75,000	10,000	75,000	NA	0	15,000	112,500	30,000	225,000	NA	0	25,000	187500	NA	0	10,000	75,000	NA	0	750,000
	3 (2.0 Ac.)	NA	0	10,000	20,000	10,000	20,000	NA	0	15,000	30,000	NA	0	30,000	60,000	25,000	50,000	NA	0	10,000	20,000	NA	0	NA	0	200,000
Monthly Available Total Volume (Gal/Month)		287,000		276,000		370,000		793,000		674,000		1,351,500		1,612,500		1,275,500		1,169,500		361,000		312,000		458,000		8,940,000

89.4 Total Permitted Acres x 100,000 Gallons per Acre = 8,940,000 Allowable Gallons

Site	Field	Jan		Feb		March		April		May		June		July		Aug		Sept		Oct		Nov.		Dec.		Total	
		Rate Gal	N App #/Ac.	Rate Gal	N App #/Ac.	Rate Gal	N App #/Ac.	Rate Gal	N App #/Ac.	Rate Gal	N App #/Ac.	Rate Gal	N App #/Ac.	Rate Gal	N App #/Ac.	Rate Gal	N App #/Ac.	Rate Gal	N App #/Ac.	Rate Gal	N App #/Ac.	Rate Gal	N App #/Ac.	Rate Gal	N App #/Ac.	Crop 1 #/Ac.	Crop 2 #/Ac.
27-16	1																										
27-17	1 (1.5 Ac.)	NA	0	10,000	26.4 (Crop 2)	NA	0	10,000	26.4 (Crop 1)	15,000	39.6 (Crop 1)	NA	0	25,000	66 (Crop 1)	NA	0	20,000	52.8 (Crop 1)	NA	0	10,000	26.4 (Crop 2)	10,000	26.4 (Crop 2)	184.8	79.2
	2 (3.0 Ac.)	NA	0	10,000	26.4 (Crop 2)	NA	0	10,000	26.4 (Crop 1)	15,000	39.6 (Crop 1)	NA	0	25,000	66 (Crop 1)	NA	0	20,000	52.8 (Crop 1)	NA	0	10,000	26.4 (Crop 2)	10,000	26.4 (Crop 2)	184.8	79.2
27-18	1 (4.5Ac.)	10,000	26.4 (Crop 2)	NA	0	NA	0	20,000	52.8 (Crop 1)	20,000	52.8 (Crop 1)	NA	0	30,000	79.2 (Crop 1)	NA	0	10,000	26.4 (Crop 2)	10,000	26.4 (Crop 2)	NA	0	NA	0	184.8	79.2
	2 (4.5 Ac.)	10,000	26.4 (Crop 2)	NA	0	NA	0	20,000	52.8 (Crop 1)	20,000	52.8 (Crop 1)	NA	0	30,000	79.2 (Crop 1)	NA	0	10,000	26.4 (Crop 2)	10,000	26.4 (Crop 2)	NA	0	NA	0	184.8	79.2
	3 (4.0 Ac.)	10,000	26.4 (Crop 2)	NA	0	NA	0	20,000	52.8 (Crop 1)	20,000	52.8 (Crop 1)	NA	0	30,000	79.2 (Crop 1)	NA	0	10,000	26.4 (Crop 2)	10,000	26.4 (Crop 2)	NA	0	NA	0	184.8	79.2
27-19	1 (9.9 Ac.)	NA	0	NA	0	NA	0	10,000	26.4 (Crop 2)	NA	0	30,000	79.2 (Crop 1)	NA	0	20,000	52.8 (Crop 1)	20,000	52.8 (Crop 1)	NA	0	10,000	26.4 (Crop 2)	10,000	26.4 (Crop 2)	184.8	79.2
	2 (9.3 Ac.)	NA	0	NA	0	NA	0	10,000	26.4 (Crop 2)	NA	0	30,000	79.2 (Crop 1)	NA	0	20,000	52.8 (Crop 1)	20,000	52.8 (Crop 1)	NA	0	10,000	26.4 (Crop 2)	10,000	26.4 (Crop 2)	184.8	79.2
27-20	1 (4.3 Ac)	10,000	26.4 (Crop 2)	NA	0	NA	0	10,000	26.4 (Crop 2)	NA	0	30,000	79.2 (Crop 1)	NA	0	20,000	52.8 (Crop 1)	20,000	52.8 (Crop 1)	NA	0	NA	0	10,000	26.4 (Crop 2)	184.8	79.2
	2 (4.3 Ac.)	10,000	26.4 (Crop 2)	NA	0	NA	0	10,000	26.4 (Crop 2)	NA	0	30,000	79.2 (Crop 1)	NA	0	20,000	52.8 (Crop 1)	20,000	52.8 (Crop 1)	NA	0	NA	0	10,000	26.4 (Crop 2)	184.8	79.2
	3 (7.1 Ac.)	10,000	26.4 (Crop 2)	NA	0	NA	0	10,000	26.4 (Crop 2)	NA	0	30,000	79.2 (Crop 1)	NA	0	20,000	52.8 (Crop 1)	20,000	52.8 (Crop 1)	NA	0	NA	0	10,000	26.4 (Crop 2)	184.8	79.2
	4 (6.4 Ac.)	NA	0	NA	0	10,000	26.4 (Crop 2)	10,000	26.4 (Crop 2)	NA	0	30,000	79.2 (Crop 1)	30,000	79.2 (Crop 1)	NA	0	10,000	26.4 (Crop 1)	NA	0	NA	0	10,000	26.4 (Crop 2)	184.8	79.2
27-21	1 (6.6 Ac.)	NA	0	10,000	26.4 (Crop 2)	10,000	26.4 (Crop 2)	NA	0	15,000	39.6 (Crop 1)	NA	0	30,000	79.2 (Crop 1)	25,000	66 (Crop 1)	NA	0	10,000	26.4 (Crop 2)	NA	0	NA	0	184.8	79.2
	2A (14.5 Ac.)	NA	0	10,000	26.4 (Crop 2)	10,000	26.4 (Crop 2)	NA	0	15,000	39.6 (Crop 1)	NA	0	30,000	79.2 (Crop 1)	25,000	66 (Crop 1)	NA	0	10,000	26.4 (Crop 2)	NA	0	NA	0	184.8	79.2
	2B (7.5 Ac.)	NA	0	NA	0	10,000	26.4 (Crop 2)	10,000	26.4 (Crop 2)	NA	0	15,000	39.6 (Crop 1)	30,000	79.2 (Crop 1)	NA	0	25,000	66 (Crop 1)	NA	0	10,000	26.4 (Crop 2)	NA	0	184.8	79.2
	3 (2.0 Ac.)	NA	0	10,000	26.4 (Crop 2)	10,000	26.4 (Crop 2)	NA	0	15,000	39.6 (Crop 1)	NA	0	30,000	79.2 (Crop 1)	25,000	66 (Crop 1)	NA	0	10,000	26.4 (Crop 2)	NA	0	NA	0	184.8	79.2

NUTRIENT MANAGEMENT PLAN FOR SLAS 27-17
SEPTAGE APPLICATIONS TO BERMUDA GRASS AND RYE

A. General Information

1) Field 1 contains approximately 1.5 acres; Field 2 contains approximately 3.0 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 Munden in Field 1 and Conetoe Field 2 (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		No App/ Harvest Rye April 15th			No App/ Harvest Bermuda June 15st		No App/Harvest Bermuda Aug 15th		Harvest Bermuda Oct 15th / Plant Rye		
2	No App		No App/ Harvest Rye April 15th			No App/ Harvest Bermuda June 15st		No App/Harvest Bermuda Aug 15th		Harvest Bermuda Oct 15th / Plant Rye		

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 & Stop Application March 1st
f) Harvested April 1st through April 15th

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

a) Hybrid Bermudagrass for Hay
b) Growing season starts April 15th
c) Application begins April 15th
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.

Hyraulic 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	**0**	0	0	52.8
February	Rye	10,000	10,000	26.4	79.2
March	Rye	**0**	10,000	0	79.2
April	Rye	10,000	20,000	26.4	26.4 (Harvest Rye)
May	Bermuda	15,000	35,000	39.6	66
June	Bermuda	**0**	35,000	0	66
July	Bermuda	25,000	60,000	66	132
August	Bermuda	**0**	60,000	0	132
September	Bermuda	20,000	80,000	52.8	184.8
October	Rye	**0**	80,000	0	0 (Plant Rye)
Nov	Rye	10,000	90,000	26.4	26.4
Dec	Rye	10,000	100,000	26.4	52.8
		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/ (May '12)

3) Field 1 & 2 have been 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.

4) Field 1 & 2 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: 6-13-12
Site Operator

Plan prepared by: C. Scott Carpenter (TSP-09-6152) Date: 06/13/2012

Address: 208 Williams Street
Greenville, NC 27858

Phone: (252) 917-4288

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SOLID WASTE SECTION

Septage Land Application Log Cover Sheet

Site Operator: Sammy Smith
SLAS Permit #: 27-17
Site Location : _____
(street address for the site or latitude and longitude)

Number of acres permitted: 4.5
Permitted application rate: 100,000 Gallons Per Acre-Yr
(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."

Sammy Smith
(signature)

6-13-12
(date)

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
401 Oberlin Rd., Ste. 150, Raleigh, N.C. 27605

I. Site and Operator Information

1. Applicant Atlantic Sewage Control
   Address PO Box 2560
   Kitty Hawk, NC 27949
   Phone 252-255-2030

2. Contact person for site operation (if different from applicant): ~~Scott Carpenter~~ J. Bryan Smith
   Title or position ~~Agronomist/Soil Scientist~~ Phone ~~252-917-4288~~
   Address ~~Soil Plus, LLC~~
   ~~208 Williams St~~
   ~~Greenville, NC 27858~~

3. Landowner Finley S. Newbern & H.D. Newbern, Jr.
   Address PO Box 189
   Powells Point, NC 27966

4. Site Location: County: Currituck State Road Number 1118
   Directions to site: US 158 East to SR1121 East to SR1118 left and path is immediately on right.

5. Indicate whether request is: new _____ renewal X modification _____
   (Name Change Only)
   For a permit renewal or modification, provide the following information:
   Existing site permit number: SLAS-27-17 permit expiration date: 12/30/2011

6. Number of acres meeting the requirements of the N.C. Septage Management Rules: 4.5 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 pumping 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, airactivated valves through field with evenly spreading material without overlaps and 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 / 1-9-12

Signature*** Date

~~C. Scott Carpenter~~ J. Bryan Smith Owner ~~Agronomist/Soil Scientist~~

Print name Title

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

*** Refer to Section .0821(e) of the N.C. Septage Management Rules.**

**** Refer to Section .0821(g) of the N.C. Septage Management Rules.**

*****Signature of company official required.**

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SOLID WASTE SECTION

Landowner's Authorization to Operate a Septage Land Application Site
SLAS 27-01

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, Finley S. Newbern (name of site owner) hereby certify that I am the owner of 4.5 acres of land located on SR 1118 at the end of SR1121 in Currituck Co. and identified by Tax Map 122 Parcel 5A (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 a septage detention or treatment facility for a period of Five (5) Years (length of time), beginning April 1, 2009 (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 H.D. Newbern (names of all co-owners, or state none).

Signature of landowner _____ Date 6-10-09

Signature of landowner _____ Date 6-10-09

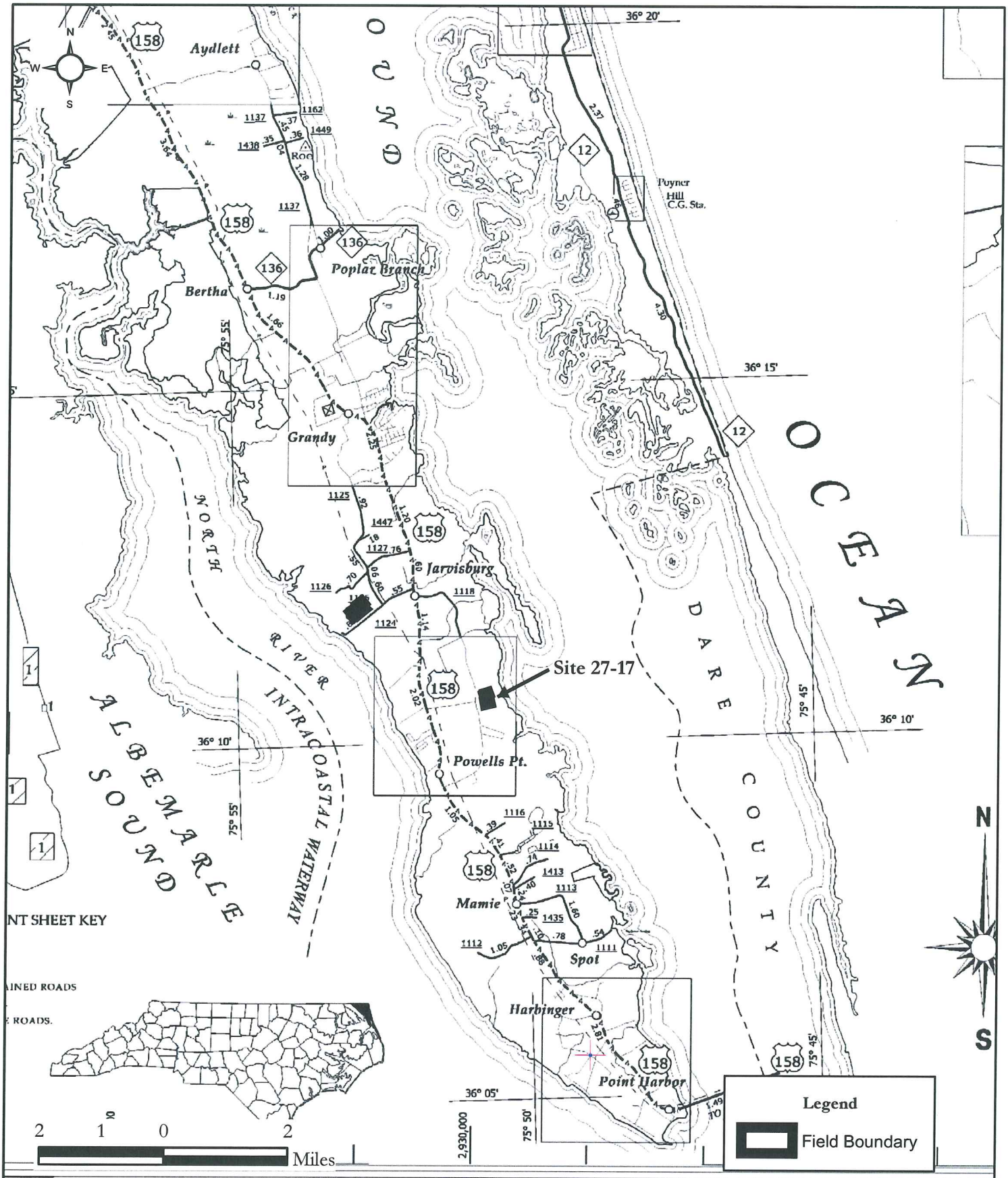
Sworn to and subscribed before me this 10th day of June, 2009.

Brandi M. Galbreath
(Notary Public)

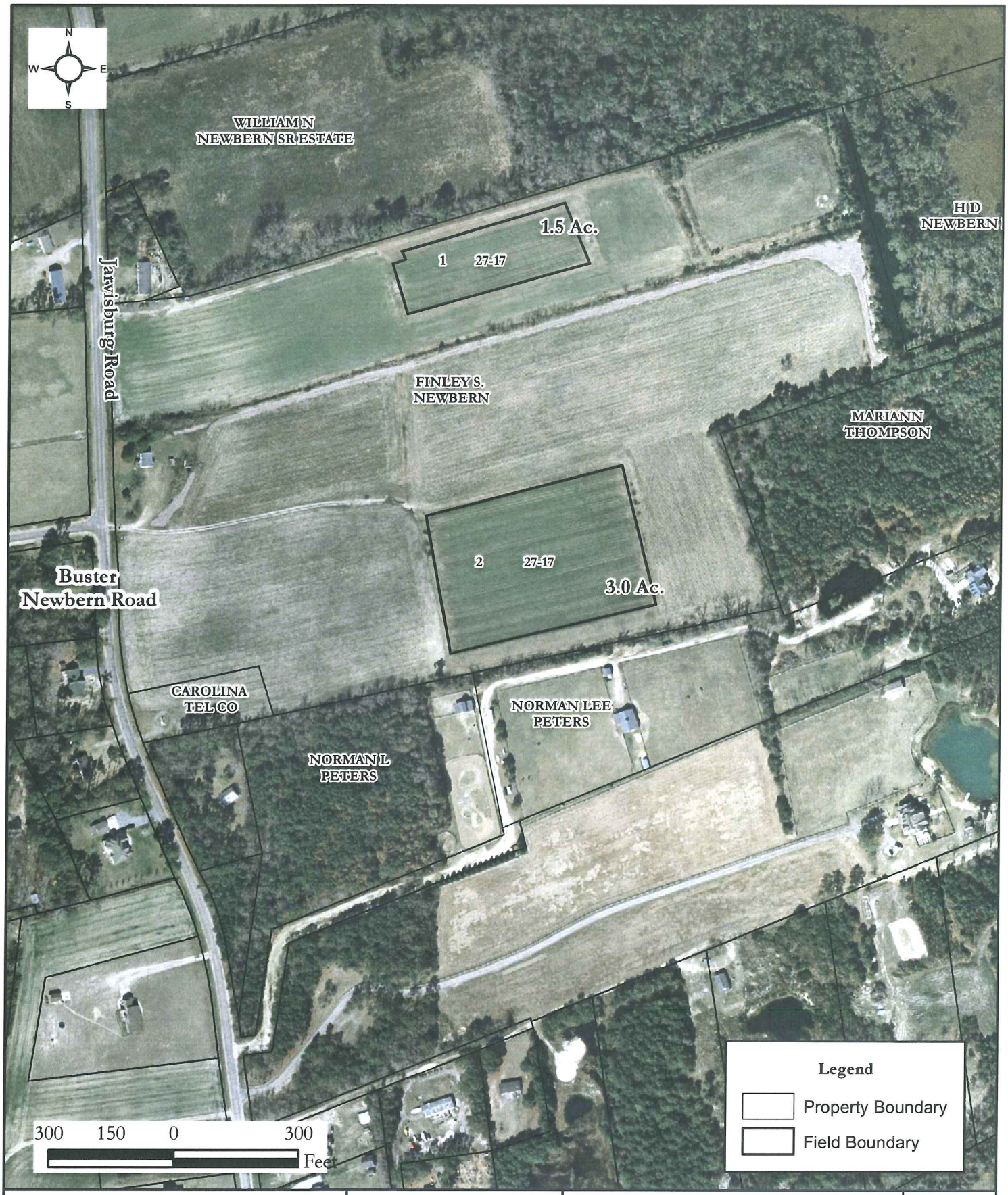
(OFFICIAL SEAL)

My Commission expires: 5-11-2013

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



Scale: 1 inch equals 2 miles	SOIL PLUS	SLAS 27-17 LOCATION MAP	Figure
Drawn by: CSC		Permit Renewal	1
Reviewed by:		Powells Point, North Carolina	
Date: January '12		Soil Plus Project # 201007.A13	



Scale: 1 inch equals 300 feet	SOIL PLUS	**SLAS 27-17 FIELD MAP**	**Figure**
Drawn by: CSC		Permit Renewal	2
Reviewed by:		Powells Point, North Carolina	
Date: January '12		Soil Plus Project # 201007.A13	