

North Carolina  
Department of Environment and Natural Resources



Division of Waste Management

Michael F. Easley, Governor  
William G. Ross Jr., Secretary  
William L. Meyer, Director

March 6, 2001

MR DANIEL GRAY  
ARROW SEPTIC SYSTEM  
CLEANING & MAINTENANCE  
PO BOX 1575  
NEWPORT NC 28770

**RE: SLAS permit renewal  
Arrow Septic System Cleaning & Maintenance  
SLAS-16-07  
SR 1137 in Carteret County**

Dear Mr. Gray:

The NC Division of Waste Management has reviewed the application you submitted to re-permit a septage land application site with permit # **SLAS-16-07**. The application has been approved and your permit is enclosed. If you have any questions about your permit, we'll need the number in order to answer your questions.

Please carefully read all permit conditions. The nutrient management and soil erosion and runoff control plans you submitted have been incorporated into the conditions of the permit. Note Permit Condition 2, concerning hay harvest. If hay is cut without observing the 30-day waiting period, the hay shall be disposed of and not be fed to any livestock or come into contact with humans. You are required to notify Mr. Bobby Nelms in the Washington Regional Office (252-946-6481) each time a hay harvest is made without observing the 30-day waiting period and provide information about how the hay was disposed of.

Please note Permit Condition 12: the next time you submit an application to renew this permit, you must submit septage application logs for the site. These logs shall cover the period of time that the current permit is valid for. The information you are required to record is described in Rule 15A NCAC 13B .0822 (e) (1) of the NC Septage Management Rules and 40 CFR Part 503.17(b) of the Federal Register. These rules are summarized in the memo from Ted Lyon and myself dated 2/16/2000.

Before you begin operations, representatives from the Composting and Land Application Branch and Field Operations Branch must conduct an inspection to verify that your site complies with current septage management rules. Please call me at (919) 733-0692, ext. 265 to schedule the inspection.

Sincerely,

Heather M. Buysse, Soil Scientist  
Composting & Land Application Branch

Enclosures

cc: Bobby Nelms, Waste Management Specialist  
Will E. Turner, landowner  
Carteret County Health Department

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1646 Mail Service Center, Raleigh, North Carolina 27699-1646

Phone: 919-733-0692 \ FAX: 919-733-4810 \ Internet: [www.enr.state.nc.us/](http://www.enr.state.nc.us/)

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

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

Daniel Gray  
Arrow Septic System Cleaning and Maintenance  
PO Box 1575  
Newport NC 28770

is hereby issued a permit to operate Septage Land Application Site with permit # **SLAS-16-07** on SR 1137 in Carteret County. 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 3-5-01

  
Dexter R. Matthews, Chief  
Solid Waste Section

Operator: Daniel Gray  
SLAS #: 16-07  
County: Carteret

**Permit Conditions:**

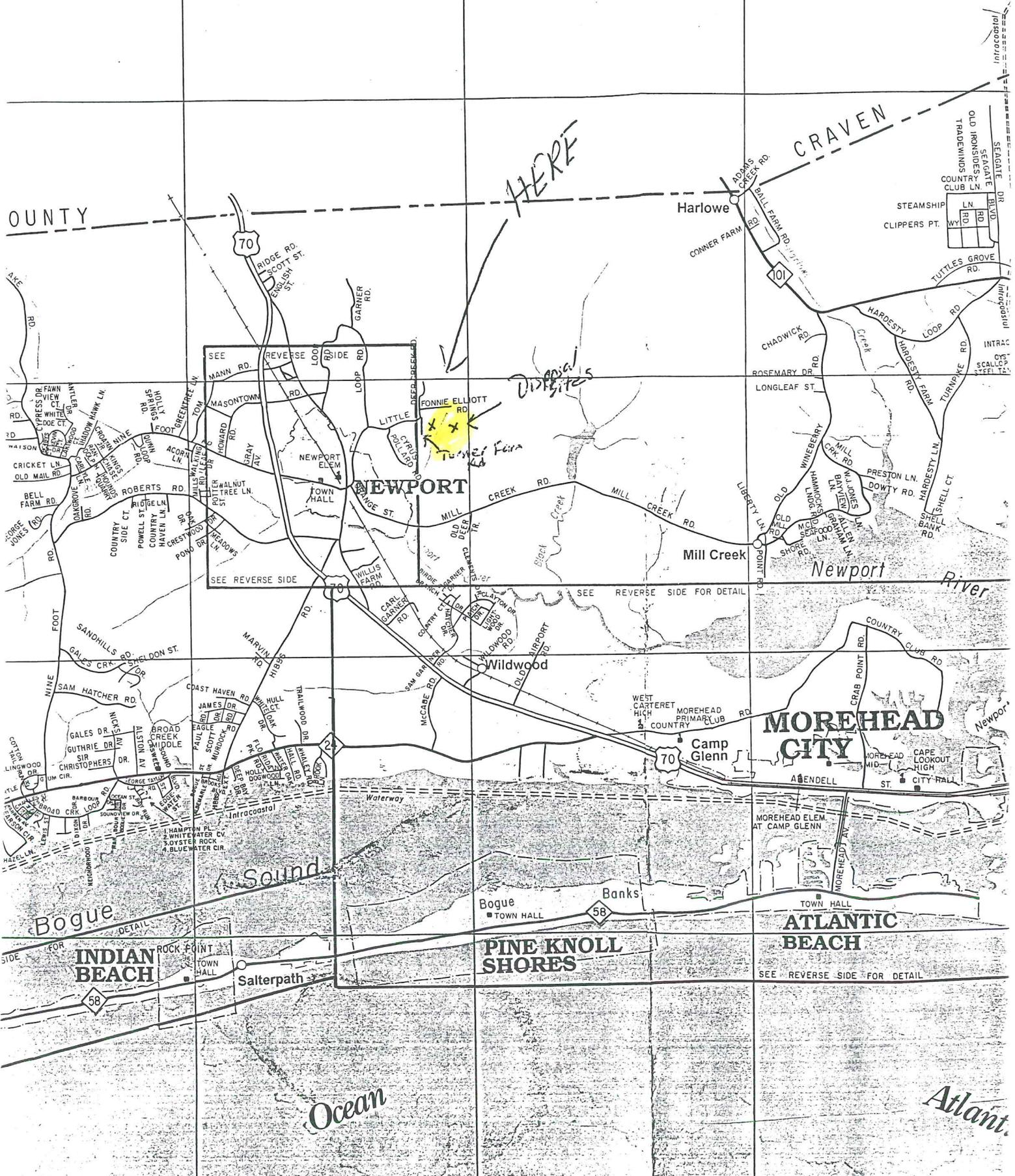
1. This permit shall become void if the soils fail to adequately assimilate the septage and shall be rescinded unless the site is maintained and operated in a manner which will protect the assigned water quality standards of the surface waters and ground waters.
2. This site shall be operated and maintained in accordance with the nutrient management plan submitted by Daniel Gray and approved by the Division. The site shall be divided into two fields as designated on the map attached to the nutrient management plan. The fields, known as Field 1 (2.5 acres) and Field 2 (2 acres), shall remain established in bermudagrass and shall be overseeded with ryegrass at a rate of 30 lbs/acre between September 15 and November 15 of each year. The bermudagrass shall be harvested as hay from both fields whenever it reaches approximately 12 inches in height, or roughly every 4-6 weeks beginning in June. Ryegrass shall be harvested as hay from both fields in April. The 30-day waiting period between the last septage application and the harvest of a crop shall be met by rotating septage application between the two fields. While harvesting hay in Field 1 septage shall be applied exclusively to Field 2. While harvesting in Field 2, septage shall be applied exclusively in Field 1. If hay is cut without observing the 30-day waiting period, the hay shall be disposed of and not be fed to any livestock or come into contact with humans. The Permittee shall notify the Waste Management Specialist from the Division of Waste Management in the Washington Regional Office each time a hay harvest is made without observing the 30-day waiting period and provide information about how the hay was disposed of. 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 Daniel Gray. A 50-ft buffer planted in bermuda and rye grasses shall be maintained around the perimeter of each field. Any site improvements noted in the plan must be installed within 30 days of plan approval. The site shall be operated and erosion and runoff control measures maintained in such a manner as to prevent migration of wastes off of the designated waste receiving site. The installation of groundwater monitoring wells may be required.
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 government agencies (local, state and federal) which have jurisdiction. It is the responsibility of the Permittee to be in compliance with the requirements of 40 CFR 503.
5. This permit may be modified or reissued to incorporate any conditions, limitations and monitoring requirements the Division of Waste Management deems necessary to adequately protect the environment and public health.
6. **This site is only permitted for the land application of domestic septage and grease septage.** Domestic septage pH shall be raised to 12 or higher by alkali addition and, without the addition of additional alkali, shall remain at 12 or higher for 30 minutes prior to land application. Grease septage or grease septage mixed with domestic septage shall be raised to pH 12 or higher by alkali addition and, without the addition of additional alkali, shall remain at 12 or higher for 2 hours prior to land application.
7. **This site contains approximately 4.5 acres that are available for septage disposal.** The maximum annual application rate shall be 50,000 gallons per acre per year, for a total, maximum annual



COUNTY

HERE

CRAVEN



Disposal Sites  
Turner Farm

NEWPORT

MOREHEAD CITY

INDIAN BEACH

PINE KNOLL SHORES

ATLANTIC BEACH

Ocean

Atlant.

9687

7512

**Operator:**  
 Daniel Gray  
**Landowner:**  
 Will Turner  
**SLAS-16-07**  
**County:** Carteret  
**Acreage:**  
 Field 1= 2 acres  
 Field 2= 2.5 acres  
**Scale:** 1 inch=200 ft  
**Date:** 8/9/99

1N



200ft

98



25ft

50ft

500ft

# APPLICATION FOR A PERMIT TO APPLY SEPTAGE ON LAND

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. Operator Daniel Gray  
Address PO Box 1575  
Newport NC 28570  
Phone (352) 223-2984

2. Landowner Will E. Turner III  
Address 127 Turner Farm Rd  
Newport NC 28570

3. Site Location: County Carteret State Road Number 1137  
Directions to site: From old Hwy 70 Turn onto Newport Loop Rd  
Take Rt on Little Deep Creek Rd then Rt on to Turner Farm Rd

4. Indicate whether request is: new \_\_\_\_\_ renewal  modification \_\_\_\_\_  
For a permit renewal or modification indicate, give the following information:  
Existing Site Permit Number: SLAS1607 and expiration date: Aug 99

5. Number of acres meeting the requirements of the N.C. Septage Management Rules:  
45 acres.

6. Substances other than septage or grease trap pumpings previously disposed of at this location:  
(a) None 1, or (b) Attach a list indicating other substances, the amounts discharged, and the dates of discharge.

7. Attach written, notarized landowner authorization to operate a septage disposal site signed by the landowner (if the permit applicant does not own the property).

8. Attach site evaluation report, including aerial photograph and soil analysis results, unless prepared by the Division.

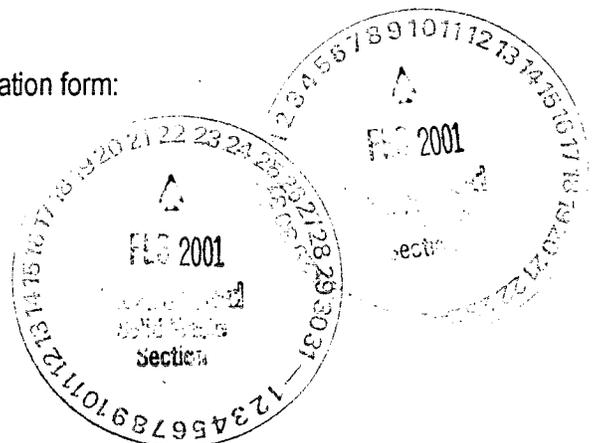
9. Attach a vicinity map (county road map showing site location).

## II. Site Management Information:

The following information shall be included with the application form:

1. Nutrient Management Plan.
2. Soil Erosion and Run-Off Control Plan.

(over)



3. Alternative plan for disposal (detention facility permit number or wastewater treatment plant authorization): SITE 1607

4. Types of septage proposed to be discharged at the site (check all that apply).

(a) Domestic septage pumped from septic tanks

(b) Grease trap pumpings

(c) Portable toilet waste

(d) Commercial / Industrial septage

5. Proposed treatment method of each type of septage to be land applied (use additional paper to explain if necessary):

Line Stabilize Domestic Septage for 30 min. to a pH of 12. Line Stabilize Grease traps for 2 hrs. at a pH of 12.

6. Proposed method of applying septage to land, including septage distribution plan if required \* (use additional paper to explain if necessary):

Spread evenly over the field by way of a vacuum truck

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):

Agricultural Land

### III. Certification

I hereby certify that:

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

David Gray  
Permit Applicant

2-7-01  
Date

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

\* Refer to Section .0821(e) of the NC Septage Management Rules.

\*\* Refer to Section .0821(g) of the NC Septage Management Rules.

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

Landowner's Authorization to Operate a Septage Land Application Site

I, Will Turner (print name of site owner) hereby certify that I am the owner of acres of land located 4.5 acres and identified by (book and page of recorded deed or tax map parcel) BK 4 pg. 316 and that I agree to allow Daniel Gray (name) to use said land for septage land application for a period of 5 yrs, beginning 12-1-00 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 (name all co-owners, or state none) \_\_\_\_\_

Will Turner III  
Signature(s)

Sworn to and subscribed before me this 19 day of December, 20 00

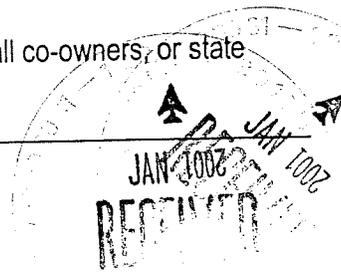
Jacy W. Mills  
(Notary Public)

(OFFICIAL SEAL)

My Commission expires: 8-2-2003

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

\*\* As required by Rule .0826



**ARROW SEPTIC SYSTEM CLEANING AND MAINTENANCE**

**DANIEL GRAY**  
**PO BOX 1575**  
**NEWPORT NC 28770**  
**(252) 223- 2984**

**SEPTAGE APPLICATION TO BERMUDAGRASS**  
**AND RYEGRASS**

**A. Best Management Practices:**

The undersign parties agree to manage the septage disposal site located off State Road 1137 in Carteret County according to the following best management practices. The list of practices have been specifically designed to land application of septage by Arrow Septic System Cleaning and Maintenance company.

**B. General information:**

NOTE: RECOMMEND THAT THE FIELDS PROPOSED FOR SEPTAGE LAND APPLICATION BE REFERRED TO AS FIELD NO.1 AND FIELD NO.2

1. FIELD NO.1 HAS 2.5 ACRES THAT MEET THE MINIMUM REQUIREMENTS FOR A SEPTAGE LAND APPLICATION SITE. THE REMAINING PORTION OF THE AREA IS UNUSABLE DUE TO WET SOILS AND SETBACKS FROM RESIDENCES, WELLS, DITCHES AND THE CREEK. RECOMMEND THAT THE ESTABLISHED BERMUDAGRASS IN THIS FIELD BE OVERSEEDDED WITH RYEGRASS AGAIN DURING THE PERIOD OF SEPT. 15 THROUGH NOV. 15, 2000.
2. FIELD NO. 2 HAS 2.0 ACRES THAT MEET THE MINIMUM REQUIREMENTS FOR A SEPTAGE LAND APPLICATION SITE. THE REMAINING AREA IS UNUSABLE DUE TO THE SAME REASONS AS FIELD NO 1. RECOMMEND THAT THIS FIELD BE OVERSEEDDED AGAIN WITH RYEGRASS DURING THE PERIOD OF SEPT.15 THROUGH NOV.15, 2000.



1. Waste analysis will be conducted at least once per year.
2. Application fields contain approximately 4.5 acres.
3. The dominant soil series at this site is Goldsboro loamy fine sand.
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.

**C. Crops to be grown and approximate planting times:**

1. A good stand of bermudagrass has already been established in field No. 1 and field No. 2.
2. Application fields, including buffer will be over-seeded with annual ryegrass at approximately 30 pounds/acre.

**D. Nitrogen Needs For Crop Grown:**

R.Y.E. = Realistic Yield Expectation

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

Crop (cut for hay)	R.Y.E.	N App. Rate	lbs. N/ ac
Coastal Bermudagrass	5.0 tons/ac	X 45 lbs N/dry ton =	225.0
Annual Ryegrass	2.0 ton/ac	X 25 lbs. N/dry ton =	50.0
			-----
			Total = 275.0

**E. Relative Application Rate for Fields:**

Month	Field	
	FIELD #1	FIELD #2
Jan	Low	Low
Feb	Low	Low
March	Low	Low
April	Med	Med
May	Med	Med
June	High	High
July	High	High
Aug	High	High
Sept	Med	Med
Oct	Med	Med
Nov	Low	Low
Dec	Low	Low

Low= 5,000 gallons; Med = 10,000 gallons; High = 15,000 gallons

NOTE: 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 or field.

**G. Additional Fertility Requirements:**

N-P-K will be added to the land application area to maintain fertility levels which will be based on the soil test results from NCDA. The buffer area should be fertilized based on the soil test results from the NCDA to maintain a good stand of grass.

## H. Harvest of the Crop:

1. The bermudagrass will be cut as hay, baled, and removed whenever it reaches approximately 12 inches in height, or roughly every 4 to 6 weeks beginning in the month of June.
2. The ryegrass will be cut as hay, baled and removed from the field beginning in the month of April to allow the stand of bermudagrass to begin to grow.
3. Hay will not be harvested within 30 days of septage application. If hay is cut within the 30 days of harvest, the hay will not be fed to any livestock or come in contact with any human.
4. While harvesting hay in Field No.1, septage will be applied to Field No.2 to allow for the 30 day separation of septage application. While harvesting in Field No.2, septage will be applied to Field No.1.

## SOIL EROSION AND RUNOFF CONTROL PLAN

Given that the slopes on this site does not exceed three percent, a 50 foot buffer, planted in bermudagrass/ ryegrass, should suffice to prevent septage waste from migrating off the fields.

Submitted by: Daniel Dwyer Date 12-24-00  
( site operator)

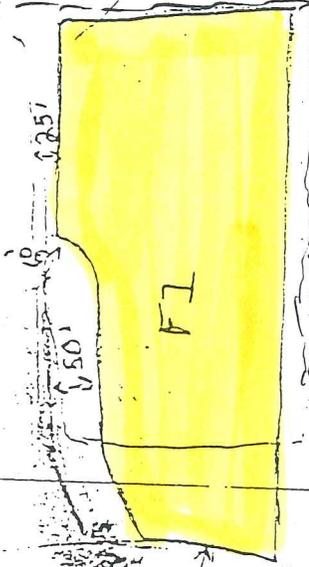
Prepared by: A Ray Haines Date 7/28/00  
Office Center Cooperative Extension  
Address Beaufort, NC 28516

Phone 252-728-8421

(14,784)  
007.7

Land Owner:  
Will Turner  
County: Carteret  
Scale: 1 inch = 200 feet  
Proposed Site  
Field 1 = 2.5 acres  
Field 2 = 2.0 acres  
4.5 Acres  
Setback(s):  
Stay 25 feet from drive.  
Stay 200 feet from creek.  
Stay 500 feet from residence

Barr



07521  
9508