

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

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

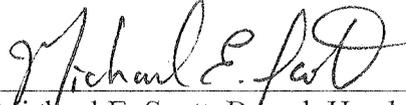
Dennis Willis
Dennis Willis Septic Service
P.O. Box 86
Cherryville, NC 28021

is hereby issued a permit to operate Septage Land Application Site with permit # **SLAS-36-10** on SR#1622 in Gaston County in approximate position 35.4° N latitude and -81.3041° 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

2/17/09



Michael E. Scott, Branch Head
Solid Waste Section

Operator: Dennis Willis
SLAS #: SLAS 36-10
County: Gaston

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Permit Conditions:

1. This permit shall become voidable if the soils fail to adequately assimilate the septage and shall be rescinded unless the site is maintained and operated in a manner which will protect the assigned water quality standards of the surface waters and ground waters.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 Dennis Willis and approved by the Division. The 27-acre site shall be divided into three fields – Field 1 (6.81 acres), Field 2 (10.96 acres) and Field 3 (8.99 acres). The 30-day waiting period between the last application of septage and the harvest of a crop shall be maintained. 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 Dennis Willis. 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 of 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 26.76 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 application rate of 1,338,000 gallons. This application rate assumes equal septage distribution, on an annual basis, over the permitted area. Monthly septage applications shall not exceed the monthly relative application rates given in the approved nutrient management plan for the site.
8. An approved above ground septage detention system with a minimum design capacity of 26,000 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.

Operator: Dennis Willis
SLAS: 36-10
County: Gaston

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9. Only the area designated on the attached site map(s) shall be utilized for septage disposal. Each load of septage discharged at the site shall be distributed from a moving vehicle in such a manner as to have no standing water when the discharge is complete. Septage shall not be applied during periods of high soil moisture.
10. 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 shall discharge septage at this site without prior appropriate notification and written approval of the Division of Waste Management.
11. 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.
12. **This permit shall expire on February 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 .0822 (e) (1) of the NC Septage Management Rules and 40 CFR Part 503.17(b) of the Federal Register. This permit is non-transferable.
13. Records shall be kept in accordance with 40 CFR 503.17(b). These records shall be made available to a representative of the Division of Waste Management upon request.
14. Any duly authorized officer, employee, or representative of the Division of Waste Management 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 ground water, surface water, or leachate.
15. Field separations in the nutrient management plan and all pertinent setbacks shall be clearly located on the site.
16. 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.



North Carolina Department of Environment and Natural Resources
Division of Waste Management

Beverly Eaves Perdue
Governor

Dexter R. Matthews
Director

Dee Freeman
Secretary

February 17, 2009

Mr. Dennis Willis
Dennis Willis Septic Service
P.O. Box 86
Cherryville, NC 28021

**RE: SLAS permit renewal
Dennis Willis Septic Service
SLAS-36-10
SR#1622 in Gaston County**

Dear Mr. Willis:

The NC Division of Waste Management has reviewed your renewal application for a septage land application site permit in Gaston County. Your application has been approved and your permit, # SLAS-36-10, is enclosed. If you have any questions about your permit, we'll need the number in order to answer your questions.

Please read all of your permit conditions carefully. Your nutrient management and soil erosion and runoff control plans have been included in your permit's conditions. In particular, review Permit Condition 12, which states you need to submit septage application logs for your site in order to renew your permit. These logs need to cover the entire time your current permit is valid. For details on the information you should include, consult the NC Septage Management Rule 15A NCAC 13B .0822 (e) (1) and the Federal register's 40CFR Part 503.17 (b). This permit condition also states that this permit is valid until February 1, 2014. If you have any questions, please ask for assistance as rule violations could expose you to administrative penalties.

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

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

Please call me at (910) 433-3352 or Michael Scott at (919) 508-8508 if you have any questions or concerns in this matter.

Sincerely,

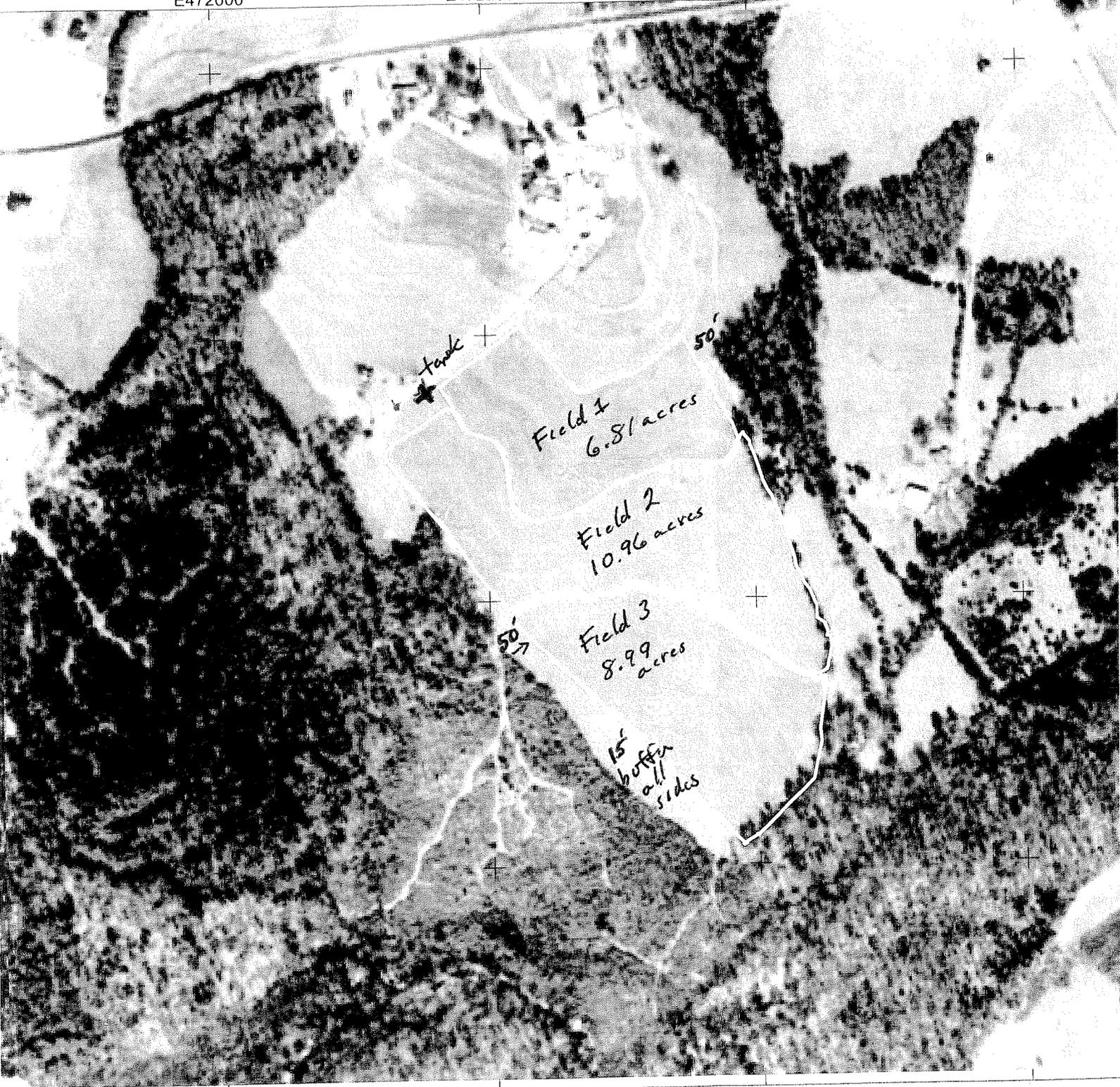
Connie Wylie, Soil Scientist
Composting & Land Application Branch

E472000

E472250

E472500

E472750



★ tank

Field 1
6.81 acres

Field 2
10.96 acres

Field 3
8.99 acres

15'
buffer
all
sides

50'

50'

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 Dennis Willis Septic Service
Address P.O. Box 86
Cherryville, NC 28021
Phone (704) 435-2326

2. Contact person for site operation (if different from applicant): Bryson Willis
Title or position Manager Phone (704) 435-2326
Address P.O. Box 86
Cherryville, NC 28021

3. Landowner H. Dennis Kiser
Address 752 Hephzibah Church Rd.
Crouse, NC 28033

4. Site Location: County Gaston State Road Number 1622

Directions to site: From I-85 south turn right on 321 N. Go ~ 3 mi + exit onto 279 Cherryville exit.

Go ~ 12 miles. TR on St. Marks Church Rd. Go to 4 way stop. TR on Hephzibah Church Rd. Property 1/2 mi on right.

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

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

Existing site permit number: SLAS 36-10 permit expiration date: 2-1-09

6. Number of acres meeting the requirements of the N.C. Septage Management Rules: 27
acres.

7. Substances other than septage or grease trap pumpings previously disposed of on the site:

(a) None _____, or (b) Attach a list indicating other substances, the amounts discharged, and the dates of discharge.

Sludge from Cherryville City Waste Treatment Plant -
Nov. 2005

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 36-10 + CMUD Wastewater Treatment Plant

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): Domestic septage will be treated w/ hydrated lime to raise pH to 12 for half hour prior to land application. Grease septage will be raised to pH of 12 for 2 hours prior to land application.

6. Proposed method of applying septage to land, including septage distribution plan if required * (use additional paper to explain if necessary): There are 3 pastures in one area divided by fence. Septage will be evenly applied by pump truck with spray attachment to one pasture, one pasture will stand required time, & the third pasture will maintain cattle. These will be rotated on a monthly basis.

7. Demonstration from the appropriate state or federal government agency that the land application site complies with the Endangered Species Law ** or if any part of the site specified is not agricultural land (use additional paper to explain if necessary): All land is in pasture and considered agricultural.

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.

Bryson Willis
Signature***

10-16-08
Date

Bryson Willis
Print name

Manager
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.

Derrin Willis 1-28-09

Updated Nutrient Management Plan for Septage Applications to Tall Fescue Grass NCDEHNR Site-Gaston County Site # SLAS 36-10

Dennis Willis Septic Service, Dennis Willis, Operator
Dennis Kiser, Owner, Site at Old Kiser Dairy



General Information

- Periodic sampling at least twice/year of the septage will be conducted for waste analysis.
- The site is divided into 3 paddocks by fencing. Septage is evenly applied by pump truck with spray attachment to one paddock, one paddock is empty for 30 days with no cattle on it and no septage application, and the third paddock maintains 50 cattle. These paddocks are rotated every 30 days. The rotation is interrupted during the winter months as the animals are maintained on Field 1 (Common Bermuda) for winter feeding. At times both remaining fields may receive septage in the same month. The 3 fields total 27 acres.
- 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). In addition, septage will not be applied to frozen, saturated, or flooded ground. At these times septage will be stored in an approved structure at waste storage facility #36-10 in Gaston County.
- Application rates for the site are 75% of the realistic yield expectation nitrogen rate since the land is grazed instead of cut for hay.
- Septage stored at SDTF 36-10 shall be provided to account for the average volume of septage pumped per week. A total of 80,000 gallons is able to be stored in 8 permitted tanks. Storage tanks are as permitted by SDTF 36-10. If volume exceeds crop nutrient needs and septage storage capacity, disposal at Charlotte Mecklenburg waste treatment facility will take place.

Crops to be grown and approximate planting times

On this site the fescue stank will be evaluated and re-seeded as needed in September of each year to maintain at least 90% ground coverage by fescue, including the buffer zones. The broadcast seeding rate will be 50 lbs/acre. Field 1 is Common Bermuda in spring (5 lb per acre), overseeded with ryegrass each fall (35 lbs per acre) or overseeded with fescue in the fall as in #1 above (35 lbs per acre). Otherwise, the field will not be overseeded and the dormant Bermuda will not receive septage application during the dormant period.

Nitrogen needs for crops grown on site

RYE = Realistic Yield Expectations

N App. Rate = Suggested N application rate based on RYE for Cecil soil.

<u>Crop</u>	<u>RYE</u>	<u>N App. Rate</u>	<u>lbs N/acre</u>
Tall Fescue	3.5 tons/acre x	45 lbs N/dry ton	130
Common Bermuda	3.5 tons/acre x	45 lbs N/dry ton	130

N application rate reduced by 25% because of grazing. Need = 97.5

Relative application rate for site

Low (5,000 gallons/acre): February, June, November-Field 2
January, July, December-Field 3

Medium (10,000 gallons/acre): August, September-Field 1
March, October-Field 2
April, November-Field 3

High (15,000 gallons/acre): May-Field 1

Note: Cumulative application rate is not to exceed the permitted application rate.

Annual application rate is not to exceed 50,000 gallons per acre.

Application Method

The preceding information is based on septage being evenly applied over the entire permitted site by pump truck with spray attachment.

Additional fertility requirements

Additional lime and fertilizer will be applied to all fields in February based on annual soil test results. Additional nitrogen may be applied in February or August to promote maximum yields. The amount will be based on the 130 lb requirement of nitrogen needed minus the standard septage analysis of 2.6 lbs on N per 1,000 gallons. NOTE: The phosphorus requirement can be reduced by taking into consideration the phosphorus from the septage analysis.

Harvest of the crops and their use

The forage on the site is grazed by beef cattle. The site is divided into 3 paddocks, which are rotated on a 30 day basis. The rotation is such that Field 1 is grazed while Field 2 is undisturbed and Field 3 receives septage. After 30 days Field 2 is grazed while Field 3 is left undisturbed and Field 1 receives septage. For the third phase of the rotation Field 3 is grazed while Field 1 is undisturbed and Field 2 receives septage. Field 1 is Common Bermuda and is not applied on from the first frost in the fall until the following May. This field is used as a winter feeding area so applications can take place on other fields during these months. The following table shows the rotation pattern:

Month	Field 1	Field 2	Field 3
January	Graze	Graze	Apply
February	Graze	Apply	Wait
March	Graze	Apply	Graze
April	Graze	Wait	Apply
May	Apply	Graze	Wait
June	Wait	Apply	Graze
July	Graze	Wait	Apply
August	Apply	Graze	Wait
September	Apply	Graze	Graze
October	Wait	Apply	Graze
November	Graze	Apply	Apply
December	Graze	Wait	Apply

Domestic septage is treated with hydrated lime to raise pH to 12 for 1/2 hour prior to land application. Grease septage is raised to pH 12 for 2 hours prior to land application.

Soil compaction reduces yields which in turn lowers allowable septage application rates. Compaction can be minimized on all sites by maintaining a healthy fescue sod, by avoiding spreading when the ground is soft by making as few trips across the application sites as possible, keeping all other vehicles off the sites as much as possible, and using field equipment that minimizes soil compaction. Aeration of all fields should be done annually after the hay harvest to reduce compaction damage.

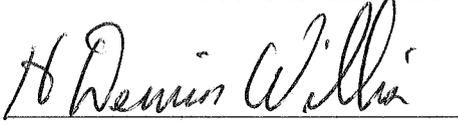
Weeds occur more often in compacted, acid soils with lower cation exchange capacity. Since weeds reduce forage yields which in turn lower allowable septage application rates, weed control is important. Spray fields with 2,4-D amine for winter weed control in late March-April or early May for summer weed control.

Disposal area boundaries are clearly marked on the ground with stakes. A "Septage Land Application Site" sign is prominently displayed at this site.

Soil erosion and runoff control plan

The site is predominantly Cecil soil classified as Highly Erodable land, surrounded by grassed fields and wooded areas, all exceeding the minimum 50 foot requirement. A small area on the west central border of the property contains shallow to bedrock soils and bedrock exposures at the surface and is excluded from land application. A 15 foot buffer is maintained around the perimeter of the site to prevent septage from

migrating off the fields, and healthy grass sod is maintained as outlined above to minimize erosion on the application areas.



H. Dennis Willis, Owner

2-16-09

Date