

A map of North Carolina is shown in the background, with the title text overlaid on it. The map is light blue and shows the state's outline and major water bodies.

NORTH CAROLINA SEPTAGE MANAGEMENT

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Division of Waste Management

NC Septage Management

- Purpose
- NC Septage Program Overview
 - Past
 - Present
 - Future
- Septage Management Rules
- Innovative Septage Treatment Example

Purpose

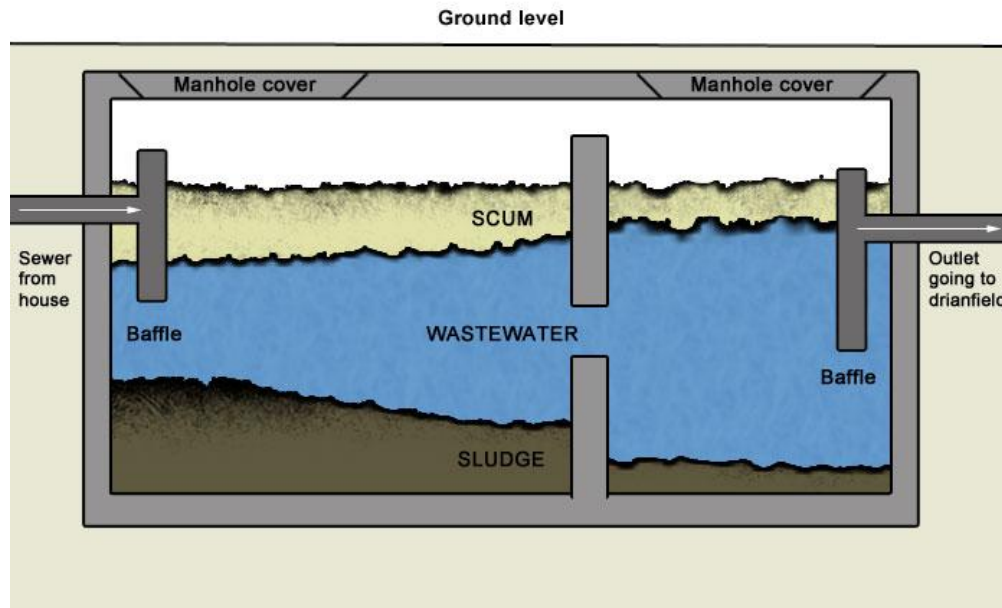
Definition:

Septage is considered a solid waste material that is a fluid mixture of untreated and partially treated sewage solids, liquids, and sludge of human or domestic origin which is removed from a wastewater system (N.C.G.S. 130A (32)).

Purpose

Types of Septage:

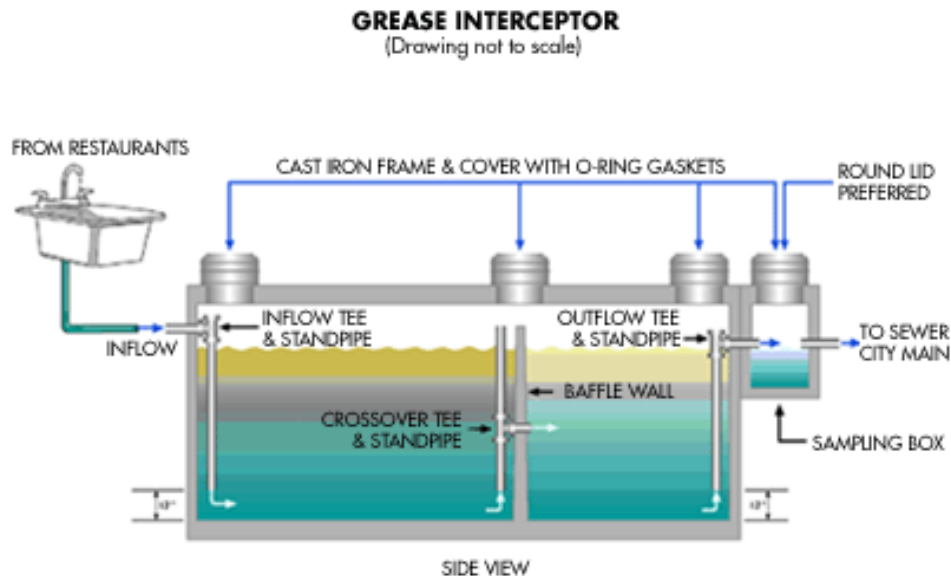
- Domestic Septage (waste from a septic tank)



Purpose

Types of Septage:

- Grease Trap Pumpings (any size grease trap)



Purpose

Types of Septage:

- Chemical or Portable Toilets



Purpose

The NC Statutory requirements for septage are established and administered by:

North Carolina Department of Environment
and Natural Resources (NCDENR)



Division of Waste Management



Solid Waste Section



Compost and Land Application Branch

Purpose

Types of Septage:

- ❑ Spent Media (treatment media from a wastewater system that has a subsurface disposal field)



Purpose

Statutory requirement:

N.C. G. S. 130A-291.1 (a) states “The Department shall established and administer a septage management program in accordance with the provisions of this section.”

Purpose

Current Staff:

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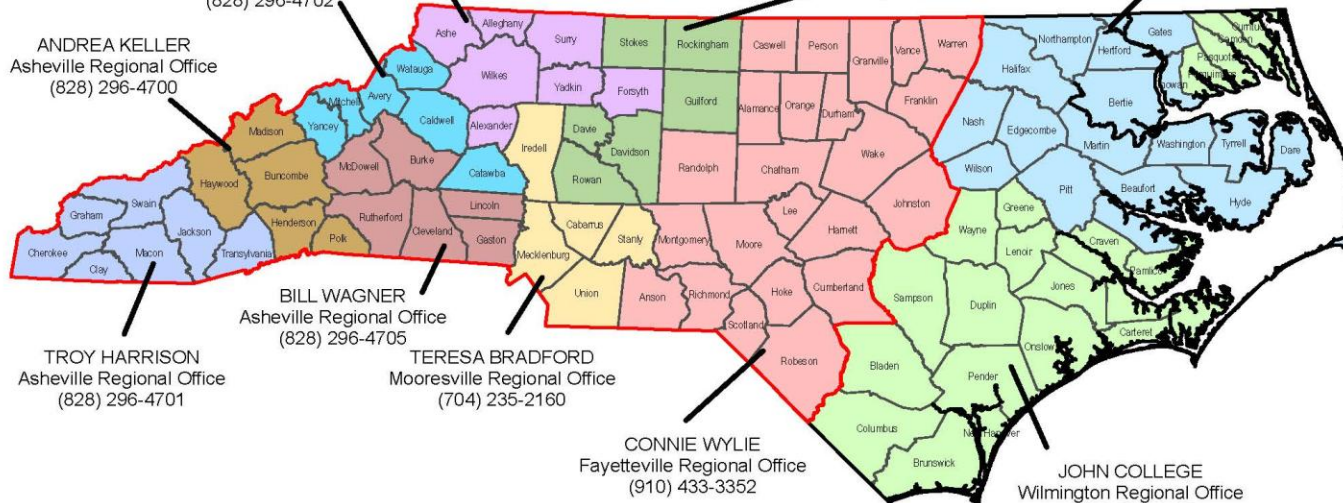
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Permitting

- COBB
- WYLIE



Purpose

The rules governing the management of septage are:

- ❑ For the protection of the public health (N.C.G.S. 130A-291.1 (b))
- ❑ For the protection of the environment
- ❑ For maintaining the integrity of the program and industry

Purpose

These rules shall include but are not limited to:

Criteria for the sanitary management of septage

Operator registration and training

The issuance, suspension, and revocation of permits

Procedures for the payment of annual fees

Purpose

The Rules for sanitary management of septage cover:

Removal / transportation



Treatment



Disposal



Storage



Purpose

Operator registration and training:

- ❑ Training is required before being permitted to remove, transport, or land apply septage
- ❑ Once in the business, continual educational training is required on an annual basis for renewal of permit. Four (4) hours required for firm permit and three (3) for septage land application site.

Purpose

Permits:

- Septage Management Firm (NCS)
Required for individuals involved in the removal and transport of septage from the generator.
- Septage Detention and Treatment Facility (SDTF)
Required for storage or treatment of septage.
- Septage Land Application Site (SLAS)
Required for disposal on the land.

Purpose

Permit fees:

- Fees are based on information submitted with an Application for Permit to Operate a Septage Management Firm
 - *\$550 for restaurant managing their own grease trap*
 - *\$550 for operation of one pump truck*
 - *\$800 for operation of more than one pump truck*

Purpose

Permit fees:

- Fees are based on the calendar year and are due annually upon permit renewal.
- Fees are not pro-rated.
The permit fee is the same no matter the time of the year permitted.

Purpose

Permit fees:

- The permit fee and completed application are due by January 1st of each year for permit renewal.
- Prior to November 1st of each year, the Division mails a notice for permit renewal and payment of permit fee.

Purpose

Permit fees:

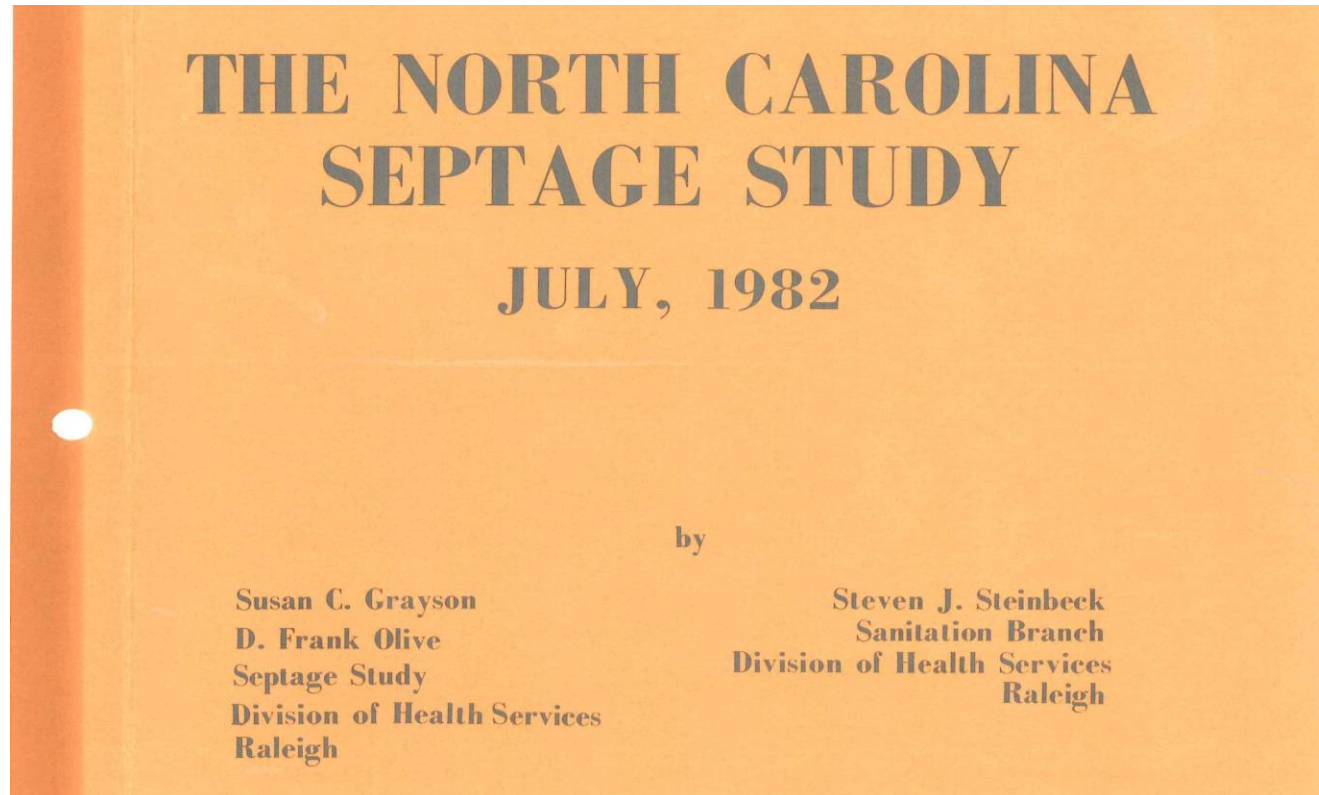
- ❑ A late fee equal to 50% of the annual permit fee is charged when the application and permit fee are not submitted by January 1st of the upcoming year.
- ❑ Septage Management Firms that only treat, store, or dispose of septage are charged an annual permit fee of \$200 per SDTF or SLAS permit.

Septage Program Overview



Septage Program Overview

In the early 1980's a study of septage was conducted in NC



Past

The 1982 North Carolina Septage Study noted:

- 1.2 million residential septage systems existed in NC
- 415 Septage business operating in NC
- Managed 87 million gallons of Septage
- 192 land applications sites



Past

The 1982 North Carolina Septage Study noted:

- WWTPs or land application sites were the two choices for final disposal
- 33% of the WWTPs allowed septage firms to dispose of septage at their facility

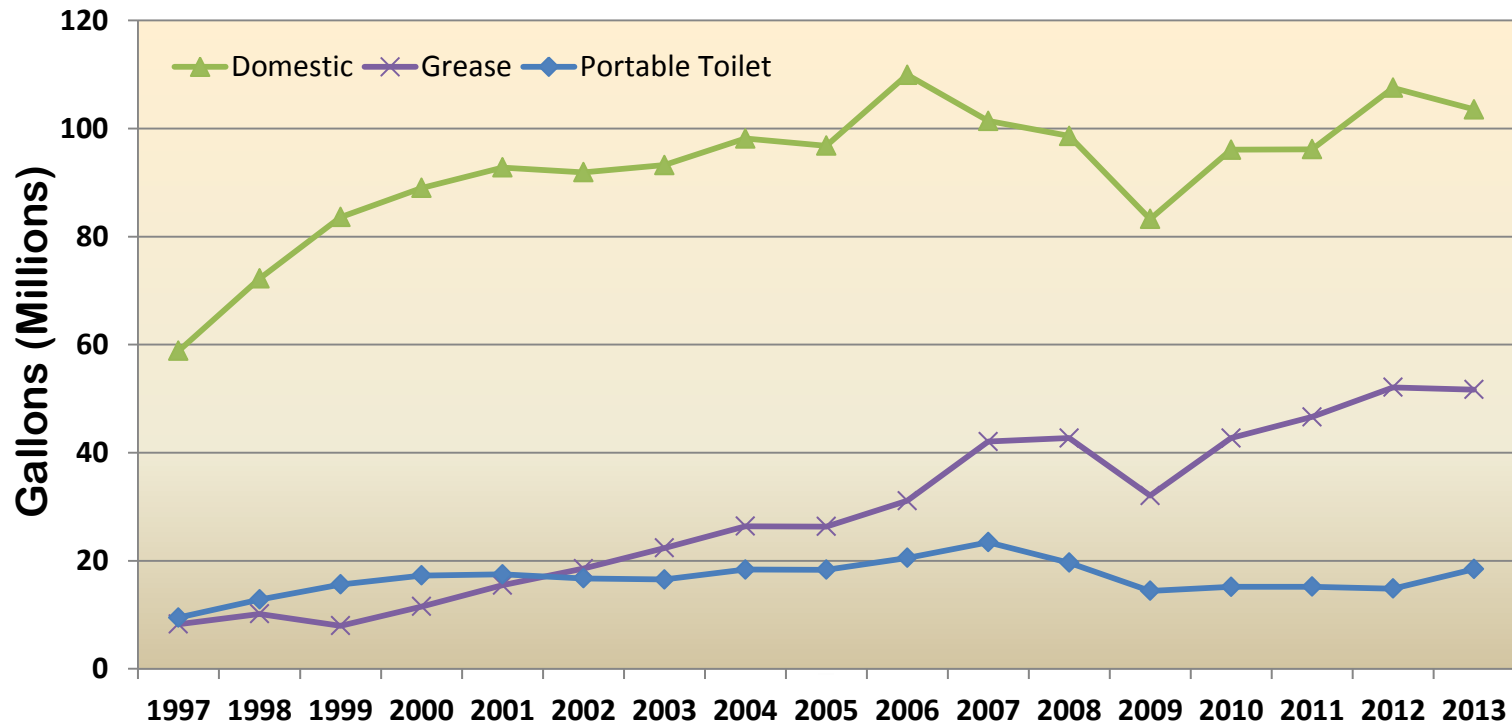


Present

- There are 2.2 Million homes with septic systems in NC. (2011 census data for domestic)
- There are 16,860 restaurants in NC (2010 census data for brown grease waste).
- There are also opportunities for portable toilet contact with an estimated;
 - 1,150 festivals and 855 sporting events per year in NC listed on <http://www.visitnc.com/>
 - <http://ncfestivals.com/>

Present

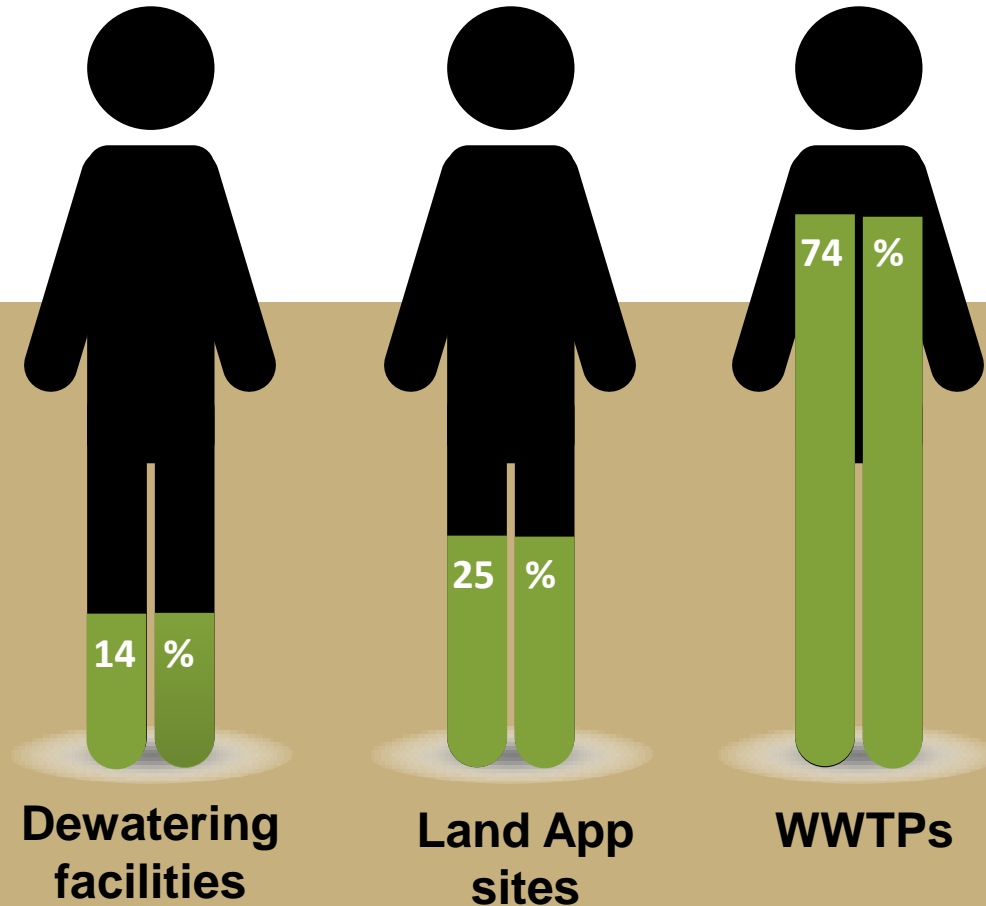
Septage Pumped Per Year



In 2013, approximately 175 million gallons of septage was managed by 520 septage management firms.

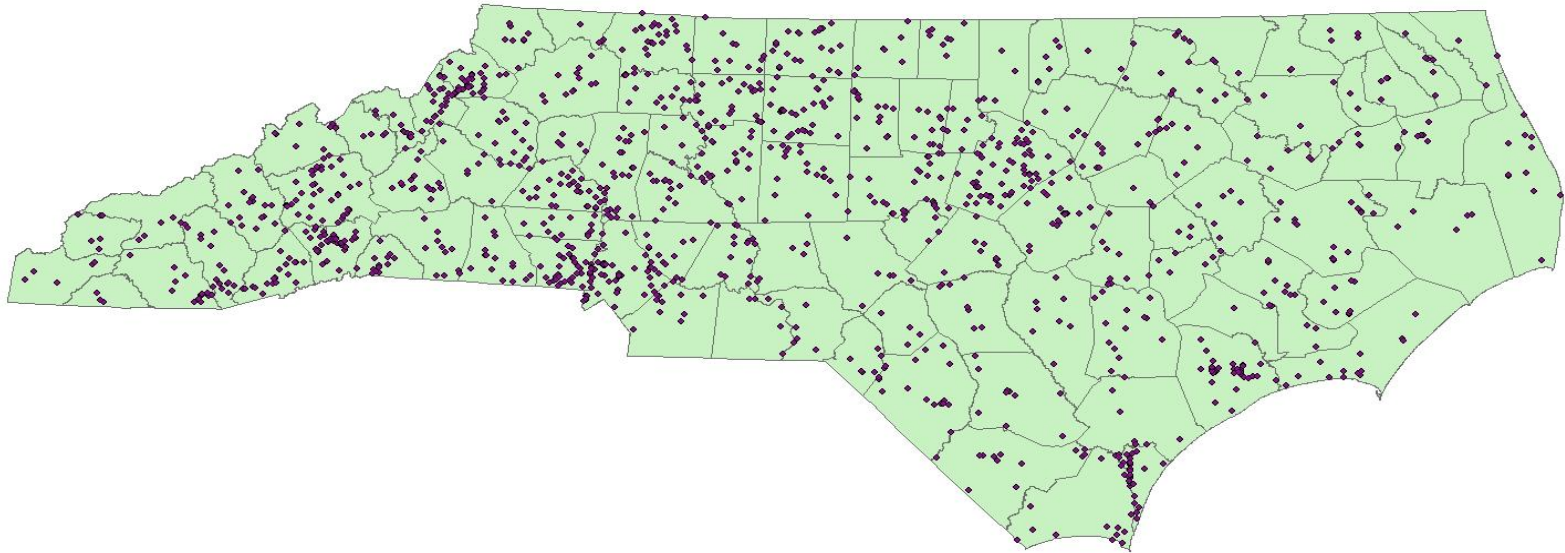
Present

Today's most common septage disposal options are:



Present

Municipal WWTP's in NC



Today, only 34% of the 300 plus WWTPs allow septage firms to access their facility

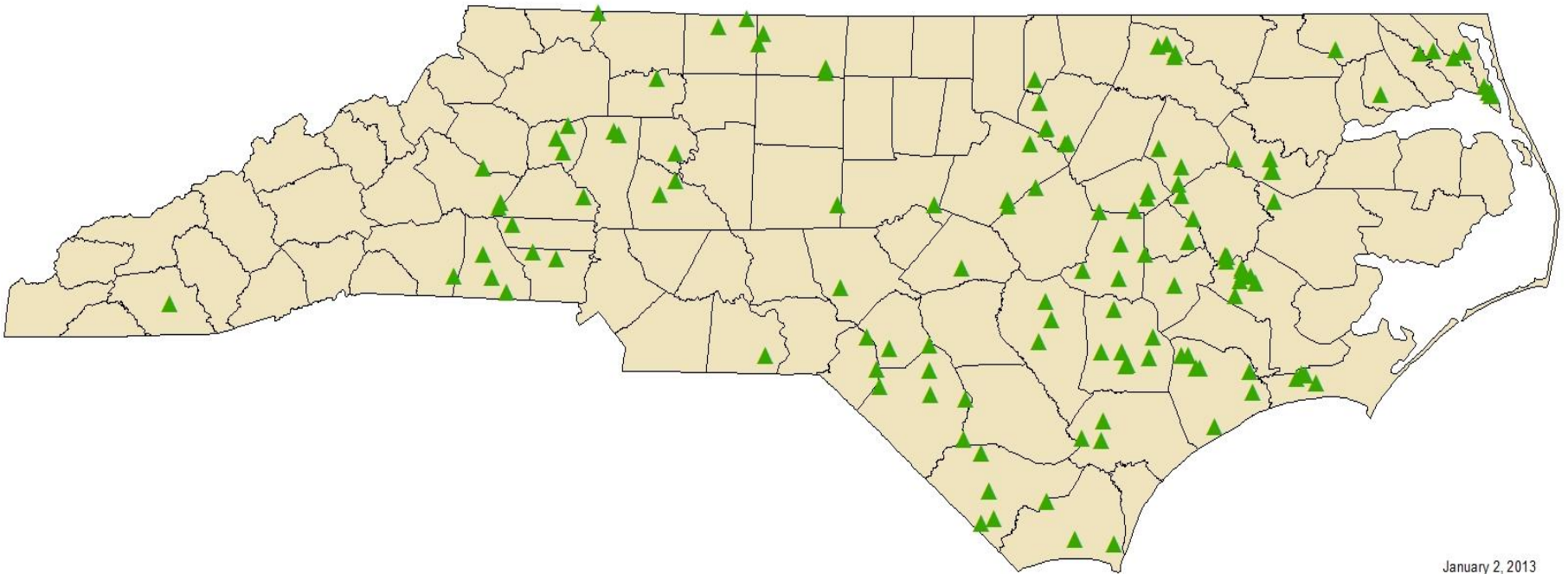
Present



Of the 103 WWTPs that allow domestic septage to be discharged into their facility, only 4 accept grease septage

Present

Septage Land Application Sites



January 2, 2013

Today, there are 131 septage land application sites (SLAS) that are permitted for septage disposal.

Present

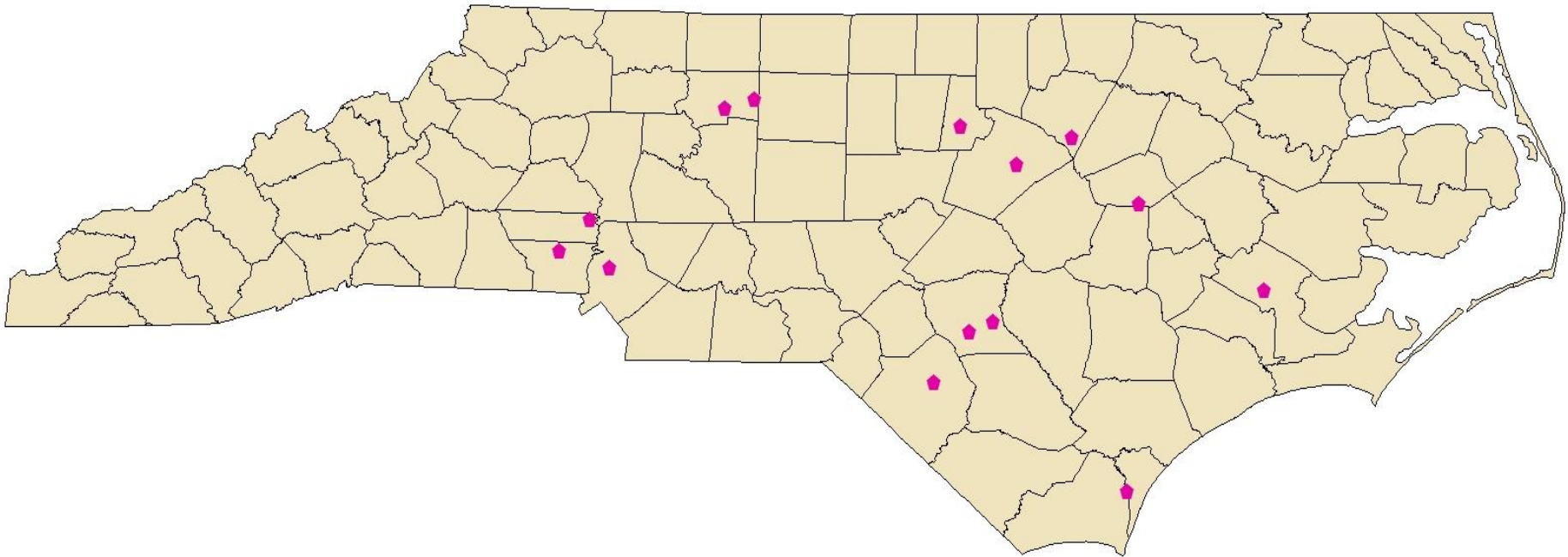
Septage can only be applied to the land if:

- *The site is permitted*
- *Septage has been properly treated*
- *A crop is present*



Present

Septage Dewatering Facilities



January 2, 2013

Currently of the 17 permitted septage dewatering facilities,
14 accept septage from other septage firms.



Present



A septic dewatering facility partially treats septage by separating the majority of the solids from the liquid portion of the septage.

Present



While dewatering produces two fractions (liquid and solid) that have to be disposed of properly, the dewatering process does aide in final septage disposal.

Future



While WWTPs, land application, and dewatering facilities, should remain as disposal options, other disposal options are becoming available.

Future

Composting

There are facilities now that are permitted to compost septage.

Composting is gaining more attention as a disposal option because it utilizes a biological process to break down organic wastes and creates a product that is beneficial to the soil and plants.



Future

Biodiesel Production

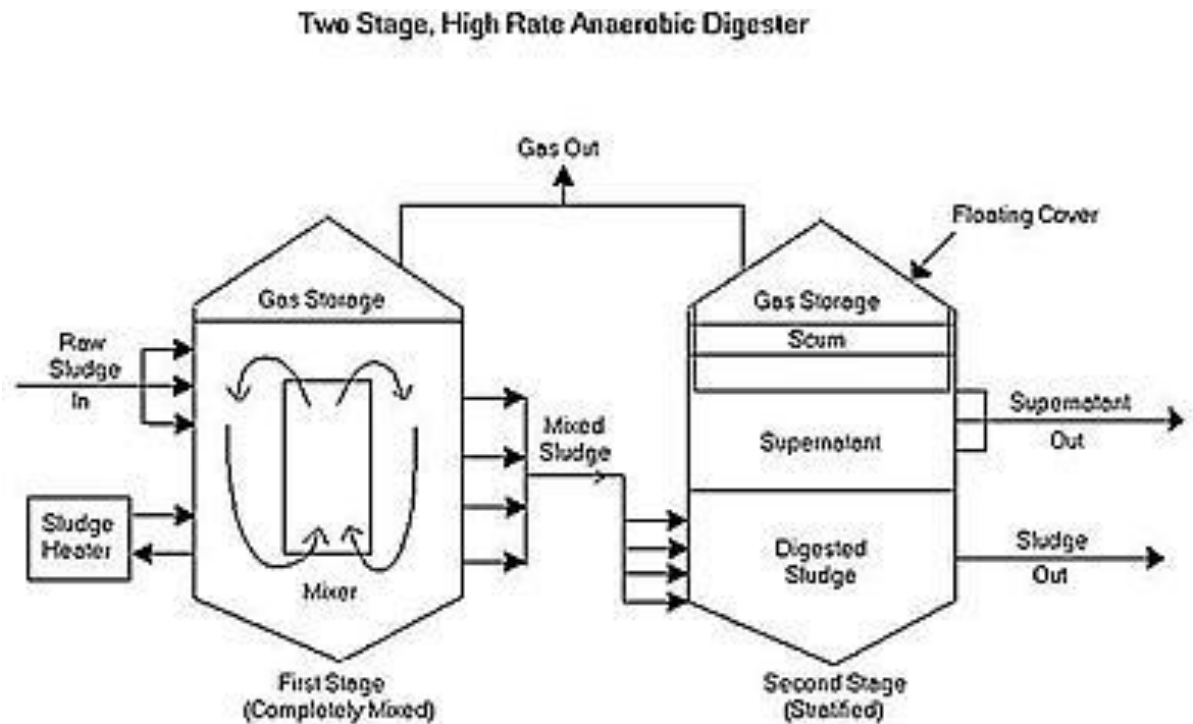
Grease septage can be used to produce biodiesel. Basically, grease septage is heated to temperatures which allow for the separation of the oils from the other constituents in grease septage.



Future

Anaerobic Digestion

Anaerobic digestion is another biological process by which organic wastes are treated in the absence of oxygen.



Septage Management Rules



Septage Management Rules

The following section is only a refresher of certain NC Septage Management Rules. Rules governing septage can be found on our website:

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

Septage Management Rules

Operation:

- ❑ Do not manage septage unless you have the proper permit.
- ❑ N.C.G.S. 130A-291.1(c) states in part “No septage management firm shall commence or continue operation that does not have a permit issued by the Department. The permit shall be issued only when the septage management firm satisfies all of the requirements of the rules adopted by the Commission.”



Septage Management Rules

Violations:

- ❑ Make sure you understand the Rules. Contact this office if you have questions.
- ❑ As per N.C.G.S. 130A-22, an administrative penalty of up to **\$15,000 per day may be assessed for each violation** of the Solid Waste Statutes or Regulations.

Septage Management Rules

Common violations for which penalties have been issued:

- ❑ Pumping without first obtaining a valid firm permit.
- ❑ Pumping with an expired firm permit.
- ❑ Discharge of septage at an unpermitted site.

Septage Management Rules

- Rule 15A NCAC 13B .0844(a) All septage shall be transported in a safe, sanitary manner that prevents leaks and spills.
- Rule 15A NCAC 13B .0844(a)(2) All valves shall be in proper working order and be completely closed during transportation;

Septage Management Rules

Rule 15A NCAC 13B .0832 (b) (2)

- Rule 15A NCAC 13B .0832 (b) (2) was amended through Session Law 2011-256 House Bill 750 to include the contracting and subcontracting of portable toilets.
- Amended rule became effective on January 1, 2014.

Septage Management Rules

Rule 15A NCAC 13B .0832 (b) (2)

states:

“No person shall rent or lease portable toilet(s) or contract or subcontract to rent or lease portable toilet(s) or manage or dispose of waste from portable toilet(s), regardless of ownership of the toilet(s) unless that person is permitted to operate a septage management firm.”



Septage Management Rules

SECTION 15. G.S. 130A-291.1

- Was amended through Session Law 2012-200 Senate Bill 229 by adding subsection (h1)
- General Statute amended to allow a septage management firm to use a pump truck not listed on previous permit as long as the firm notifies the Department within 10 days of placing the truck on the road and the truck meets all regulatory requirements.

Septage Management Rules

SECTION 15. G.S. 130A-291.1 (h1)

states:

“The annual permit application shall identify the pumper trucks to be used by the septage management firm. A permitted septage management firm shall notify the Department within 10 days of placing a pumper truck in service that was not previously included in a permit issued to the firm and shall make the pumper truck available for inspection by the Department. A septage management firm is not prohibited from use of a pumper truck that meets the requirements of the rules adopted by the Commission prior to inspection by the Department. “



State Law on Yellow Grease

- ❑ **HOUSE BILL 512 RATIFIED BILL**
- ❑ AN ACT TO AMEND THE LAWS GOVERNING RENDERING PLANTS AND OPERATIONS, TO REQUIRE CERTIFICATION OF GREASE OWNERSHIP BY COLLECTORS OF WASTE KITCHEN GREASE, AND TO CREATE CRIMINAL PENALTIES RELATED TO WASTE KITCHEN GREASE.
- ❑ It shall be unlawful for any person to do any of the following:
 - ❑ (1) Take and carry away, or aid in taking or carrying away, any waste kitchen grease container or the waste kitchen grease contained therein, which container bears a notice that unauthorized removal is prohibited without written consent of the owner of the container.
 - ❑ (2) Intentionally contaminate or purposely damage any waste kitchen grease container or grease therein.
 - ❑ (3) Place a label on a waste kitchen grease container knowing that it is owned by another person in order to claim ownership of the container.
- ❑ (b) Any person who violates subsection (a) of this section shall be penalized as follows:
 - ❑ (1) If the value of the waste kitchen grease container, or the container and the waste kitchen grease contained therein, is one thousand dollars (\$1,000) or less, it shall be a Class 1 misdemeanor.
 - ❑ (2) If the value of the waste kitchen grease container, or the container and the waste kitchen grease contained therein, is more than one thousand dollars (\$1,000), it shall be a Class H felony.



Example of Industry Local Law

- Town of Cary
Sewer Use Ordinance – Fats, Oils, and Grease Control
- All grease interceptors shall be serviced and emptied of accumulated waste content as required in order to maintain minimum design capability or effective volume of the grease interceptor, but not less often than every sixty (30) days or as permitted in a valid program modification.

Record Keeping for Septage Firms

- .0839(a)(1): date, type, quantity and location of septage pumped
- .0839(a)(2): location of the discharge



Record Keeping for Septage Firms

SEPTAGE PUMPING LOG

Firm Name: _____
Firm Permit #: _____

Date Tank Pumped	Type of Septage	Amount of Septage Pumped (gallons)	Location of Septage Pumped	Date Discharged	Where Discharged*

Innovative Septage Treatment Ex.



Innovative Septage Treatment Ex.



Innovative Septage Treatment Ex.

- ❑ Mr. Goulet's company excavated three beds or lagoons each 50' by 50'.
- ❑ Then they applied two rubber liners to each of the three beds or lagoons.
- ❑ Mr. Goulet received assistance from a PE at local University.



Innovative Septage Treatment Ex.

- ❑ Then put in pipes to aerate the beds or lagoons.
- ❑ One inch of coarse gravel and one inch of coarse cement sand was applied to protect the piping.



Innovative Septage Treatment Ex.

- ❑ After the beds or lagoons were constructed then the reeds were planted.
- ❑ The reed plant used was *Phragmites australis* or Common Reed



Innovative Septage Treatment Ex.

❑ The reed beds or lagoons acted as a dewatering system where the solids settled at the bottom and the reed plants filtered the water.



Innovative Septage Treatment Ex.

- **15A NCAC 13B .0842 INNOVATIVE OR ALTERNATIVE TREATMENT OR STORAGE METHODS**
- (a) Applications for permits for innovative or alternative treatment methods that do not fit the criteria outlined in this section will be reviewed in accordance with N.C.G.S. 130A-291.1(i).

Innovative Septage Treatment Ex.

- (c) Innovative or alternative design criteria shall be approved in cases where the applicant can demonstrate that the alternative design criteria will provide the following:
 - (1) Equal or better treatment of the waste;
 - (2) Equal or better protection of the waters of the state; and
 - (3) No increased potential for nuisance conditions from noise, odor or vermin.

Internet Resource

Septage Management Firm Permit

[Firm Permit Application Guidelines](#)

[Firm Permit Application](#)

[Pumper Log Form](#)

[Non-Pumper Application Guidelines](#)

[Non-Pumper Form](#)

[Septage Firm Cease Operation](#)

Authorizations:

[Waste Water Treatment Plant Authorization Form](#)

This form is used as a proper authorization to discharge septage to a wastewater treatment facility. Please submit the ORIGINAL notarized form to the Division of Waste Management.

[Land Application](#)

This form is used for authorization to discharge septage at a septage land application site permitted to someone other than yourself. Please submit the ORIGINAL form to the Division of Waste Management.

[Detention\Treatment](#)

This form is used for authorization to discharge septage at a septage treatment or storage facility permitted to someone other than yourself. Please submit the ORIGINAL form to the Division of Waste Management.

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



Contacts

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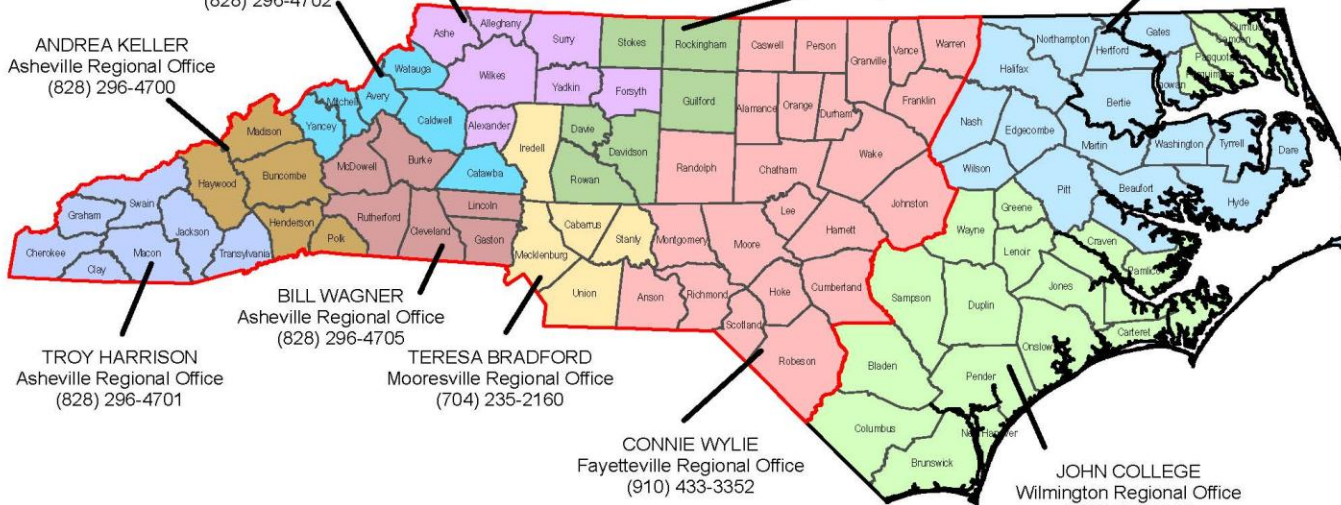
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