Rules
Of
Department of Human Resources
Public Health
Chapter 290-5-25
Land Disposal of Domestic Septage

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290-5-25-.01 Applicability. These Rules apply to any land disposal site that receives septic tank waste from only one septic tank pumping and hauling business.
Authority O.C.G.A. 31-2-8. Adopted Feb. 26, 2003; effective. Mar. 18, 2003.

290-5-25-.02 Definitions. The following definitions shall apply in the interpretation and enforcement of this Chapter.

1. "Agricultural Land" is land on which a food crop feed crop or fiber crop is grown. This includes land used as a pasture or forested land.

2. "Agronomic Rate" is the septage application rate based on a dry weight basis determined to provide the amount of nitrogen needed by the food crop, feed crop, fiber crop, cover crop or vegetation grown on the land; and to minimize the amount of nitrogen in the domestic septage that passes below the root zone of the crop or vegetation grown on the land to the groundwater.

3. "Annual Application Rate" is the maximum amount of domestic septage that may be applied to a unit area of land during a 365-day period.

4. "County Board of Health" means the County Board of Health or its designee as established by the Official Code of Georgia Annotated (O.C.G.A.), Title 31-3-1.

5. "Department" means the Department of Human Resources of the State of Georgia.

6. "Domestic Septage" is defined in the Code of Federal Regulations (CFR), Title 40, Part 503.9(f) as the liquid or solid material removed from a septic tank, cesspool, portable toilet, type III marine sanitation device or a similar system that receives only domestic sewage. This definition does not include liquid or solid material removed from a septic tank or similar treatment works that receives either commercial wastewater or industrial wastewater or grease removed from a grease trap.

7. "Domestic Sewage" means water and wastewater from humans or household operations that are discharged to a treatment system. This generally includes wastes derived from a toilet, bath, shower, sink, garbage disposal, dishwasher or washing machine. Domestic sewage may include household sewage as well as sewage from establishments such as schools, restaurants, businesses and motels as long as the sewage does not contain types of waste other than those listed above.

8. "Land Application" means the spreading of domestic septage on the land surface, the injection of domestic septage below the land surface or the incorporation of domestic septage into the soil at agronomic rates for the purpose of soil conditioning or fertilization of crops or vegetation grown in the soil.

9. "Land Disposal Site" means the location where domestic septage is applied to the land.

10. "Land frequently used by the public" includes but is not limited to public parks, ball fields, school playgrounds, plant nurseries, turf farms and golf courses.

11. "Pathogen" means a disease causing organism.

12. "Percolation Rate" means the time, expressed in minutes per inch, required for water to seep into saturated soil at a constant rate.

13. "Sinkhole" means a depression in the land surface, generally in a limestone region, which communicates or has the potential to communicate with a subterranean passage developed by solution; typical sinkholes can be broad, closed basin-like features or steep sided dropouts, or variants thereof.

14. "Soil Classifier" means an individual approved by the Department of Human Resources under provisions established in O.C.G.A. §31-3-5 (d)(1)(B) to conduct soil investigations to determine site suitability.

15. "Soil Fertility Test" shall mean a test to determine the nitrogen, phosphorous and potassium requirements for a crop grown on a unit of land.

16. "Soil Report and Map" means a site specific soil interpretative table that identifies as a minimum the following: the name of the soil series, the percent slope, the seasonal high groundwater table, the depth of any refusal or impervious layer and the absorption rate for each horizon. Soils must be classified according to U.S. Taxonomy, with soil series boundaries plotted on a map at a scale that may range from one-inch equals 10 feet to one-inch equals 100 feet. The minimum number of soil pedons observed and classified will be based on the micro relief of the site, but at least one hole shall be bored and classified per .25 acre. All borings shall be bored to a depth of 72 inches, unless a refusal layer is encountered. All borings must be flagged on site and boring locations identified on the soil survey map. The soil survey must bear the name, stamp and/or seal, address and phone number of the soil classifier.

17. "Vector Attraction" is the characteristic of domestic septage that attracts rodents, flies, mosquitoes or other organisms capable of transporting infectious agents.

18. "Well" means an excavation or opening into the ground by which groundwater is sought. This term shall not include monitoring wells used to sample groundwater.

19. "Wetland" means those areas that are inundated or saturated by surface water or ground water at a frequency and duration to support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

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290-5-25-.03 Provisions. Disposal of domestic septage by land application shall only be applied to land with a low potential for public exposure. This is land that the public uses infrequently, which includes but is not limited to agricultural land, forests and reclamation sites located in sparsely populated areas.

(1) Permit.

(a) It shall be unlawful for any person to operate a land disposal site without having first obtained a valid permit from the County Board of Health pursuant to this chapter.

(b) No site, which was not in operation prior to January 1, 2002, shall be permitted without written approval from the county governing authority of each county in which the site is wholly or partially located.

(c) Prior to the issuance of a permit, the applicant shall provide evidence of satisfactory compliance with the provisions of these rules.

(d) Permits are invalidated by a change in property ownership.

(e) The permit shall be the property of the County Board of Health and shall be returned within seven (7) days to the local health department when the site has a change in property ownership or when the permit is revoked.

(f) A permit shall not be valid for more than twelve (12) months.

(2) Application for Land Disposal Site Permit. Application for a land disposal site permit shall be made in writing to the County Board of Health on forms provided by the Department. The County Board of Health shall approve or disapprove such application after the receipt of a completed application and a review of the site. The application shall include:

(a) The name and address of the property owner and a notarized statement signed by the property owner approving the land application of domestic septage;

(b) The septic tank pump and haul business shall obtain a Septage Removal and Disposal Permit from the County Board of Health in which the land disposal site is located. Individuals involved in the land application of domestic septage must hold a valid Level II Pumper Certification from the Department of Human Resources;

(c) A plat of the property, at a minimum scale of one-inch equals 100 feet, with topography showing the drainage characteristics of the property including locations of streams, lakes or other water courses and impoundments either on or within 500 feet of the property. The plat shall show the land disposal site boundaries. The plat shall show the location of water supplies including public, non-public and individual wells within 500 feet of the disposal area. The plat shall show the location of all buildings and land uses within 500 feet of the disposal areas. The plat shall show the location of roadways to and from the disposal areas;

(d) A soil fertility test in the land disposal area;

(e) A pH test of the soil in the land disposal area;

(f) A trace metals soil test in the land disposal area;

(g) A soil report and map from an approved soil classifier;

(h) Vector attraction reduction method;

(i) Method of securing land disposal site; and

(j) Septage Application Records as applicable.

Authority O.C.G.A. 31-2-8. Adopted Feb. 26, 2003; effective Mar. 18, 2003.

290-5-25-.04. Locations of Land Disposal Sites. For land disposal, consideration shall be given to soil characteristics, seasonal groundwater levels, percolation rates, slope, loading criteria, agricultural needs and nitrogen requirements.

1. Sites shall be well drained and are not to be used where soil studies, soil types, areas of Karst or other geological data indicate the existence of soil conditions that would preclude safe and proper disposal.

2. The maximum soil percolation rate of a site shall not exceed 90 minutes per inch. Sandy soils overlaying an unconfined aquifer, which is used or may be used as a principal source of potable drinking water, shall not be utilized as land disposal sites unless special studies conducted by a soil hydrologist confirm that acceptable separation distance between the point of septage application and the seasonal water table can be achieved to prevent groundwater contamination.

3. The minimum seasonal groundwater table, bedrock or other impervious soil layer of a land disposal site shall be a minimum of 42 inches from the original ground surface.

4. Land disposal sites shall not be located within 500 feet of a public, non-public, or individual water supply well.

5. Land disposal sites shall not be located within 300 feet of a residence or other facility or land frequently used by the general public.

6. Land disposal sites shall not be located within 300 feet from the normal water level of any impoundment, tributary, stream or other body of water considered waters of the State, within 300 feet of a sinkhole or within 300 feet of a marsh, wetland or coastal waters.

7. Land disposal sites with slopes exceeding 15% shall not be considered for the land application of septage. Surface spreading shall be limited to land disposal sites with a slope of 6% or less.

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290-5-25-.05. Management of Land Disposal Sites.

1. Only domestic septage shall be applied to the site. No grease, industrial, solid or hazardous waste shall be applied on the site.

2. The domestic septage shall be screened for removal of solid waste prior to septage land application. Any solid waste shall be collected and properly disposed.

3. The pH of the soil in the land disposal area shall be maintained at 6.5 or greater as measured by annual soil tests.

4. Public access to the land disposal site should be restricted by fencing or other means approved by the County Board of Health.

5. Each site entrance shall have a “No Trespassing” sign posted identifying the area as a land application disposal site. The sign shall include the name and address of the person or business engaging in the land application of septage and the site permit number. All letters and numerals shall not be less than one (1”) inch in height and shall be visible.

6. An annual soil fertility test shall be required and utilized to determine the agronomic application rate. No person shall land apply domestic septage to a site on which the nitrogen requirements have been met for the calendar year.

7. An annual trace metals (pollutant) soil test shall be required to determine the presence of Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium and Zinc. No person shall land apply domestic septage to a site that exceeds the Cumulative Pollutant Loading Rate Limit for any pollutant found in Table 2.

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290-5-25-.06. Vector Reduction Management. The following management practices, found in CFR, Title 40, Part 503.33, must be met for compliance with vector reduction requirements. Domestic septage may be land applied by one of the following methods:

1. Domestic septage shall be injected below the surface of the land and no significant amount of septage shall be present on the land surface within one (1) hour after septage is injected. Injection may be accomplished by any device(s) that place the septage beneath the soil in a narrow trench at a depth of no greater than eighteen (18) inches and promptly replaces the cover soil in the same action of trenching and placing septage. Excavation of a trench followed by placement of septage and later covering of the trench is not considered injection;

2. Domestic septage applied to the surface of the land shall be incorporated into the soil within six hours after septage application; or

3. The pH of domestic septage shall be raised to twelve (12) or higher by alkali addition and without the addition of more alkali shall remain at twelve (12) or higher for thirty (30) minutes. Each container of domestic septage shall be monitored for compliance with CFR, Title 40, Part 503.33 (b)(12). Domestic septage is to be applied in a manner that will prevent any ponding or standing liquid on the land surface twenty-four (24) hours after application.

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290-5-25-.07. Pathogen Control Management. The following management practices, including practices found in CFR, Title 40, Part 503.32(b)(5), must be met for compliance with pathogen control requirements.

1. Food crops with harvested parts that touch the land surface shall not be harvested for fourteen (14) months after domestic septage application.

2. Food crops with harvested parts that develop above the land surface, feed crops or fiber crops shall not be harvested for thirty (30) days after domestic septage application.

3. Food crops with harvested parts below the land surface shall not be harvested for thirty-eight (38) months after domestic septage application.

4. Turf grown on land where domestic septage is applied shall not be harvested for one (1) year after domestic septage application.

5. Animals shall not be allowed to graze on the land for thirty (30) days after domestic septage application.

6. Public access shall be restricted for thirty (30) days after domestic septage application.

7. Domestic septage shall not be applied to soils already saturated with water, which can result in contaminated runoff or drainage. Domestic septage shall not be applied when the saturated field capacity of the site is 75% or greater. Field saturation can be estimated from Table 1.

8. Domestic septage shall not be applied during rainfall sufficient to cause runoff from the land disposal site.

9. An adequate separation distance and buffer area between the land area used for domestic septage application and surface water shall be maintained. Domestic septage shall not be applied within 300 feet of any lake, stream, tributary, coastal waters or other watercourses and water impoundments considered waters of the State, within 300 feet of a sinkhole or within 300 feet of a marsh, wetland or coastal waters.

10. An undisturbed vegetative buffer strip of at least thirty-three (33) feet wide shall be maintained along all streams and drainage ditches within or adjacent to the land disposal site.

11. Domestic septage shall not be applied within 500 feet of a public, non-public or individual well.

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290-5-25-.08. Application Rate. The annual application rate for domestic septage applied to a land disposal site shall not exceed 40,000 gallons per acre per year. The domestic septage must be spread or injected as evenly as possible over the entire acreage where the crop or vegetation is grown. For maximum use of nutrients, match the domestic septage application to the crop needs.

1. Test the soil to establish existing nutrient fertility levels.

2. Select an agronomic application rate that does not exceed the crop nutrient requirements.

3. The maximum volume of domestic septage that may be applied to any site depends on the amount of nitrogen required for the planned crop and yield. The maximum volume is calculated by the following formula:

$$\text{Annual Application Rate (gallons/acre/year)} = \frac{\text{Annual Pounds of Nitrogen required for the Crop \& Yield}}{0.0026}$$

4. The Annual Pollutant Loading Rate Limit shall not be exceeded for any pollutant listed in Table 2.

Authority O.C.G.A. 31-2-8. Adopted Feb. 26, 2003; effective Mar. 18, 2003.

290-5-25-.09. Septage Holding Facilities. It is necessary that all septage land disposal systems have an alternative method for the temporary holding of domestic septage during periods of adverse weather. Such systems shall meet the following requirements:

1. No overflow or leakage of septage may be allowed from the system onto the ground surface, into surface waters or into the groundwater table;

2. Odors from such systems shall be controlled at all times;

3. Septage is to be removed from the holding facility and applied to the land disposal site as soon as weather and soil conditions permit; and

4. All holding facilities are to be inspected annually for compliance.

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290-5-25-.10. Record Keeping. Individuals involved in the land application of domestic septage shall maintain the following information for five (5) years. The information shall be available for inspection at the place of business by the Department of Human Resources, County Board of Health, Department of Natural Resources or the United States Environmental Protection Agency. The Septage Application Record form shall be used to record the following information:

1. The location, by either street address or latitude and longitude, of each site on which domestic septage is applied;

2. The number of acres of each site on which domestic septage is applied;

3. The date, time and quantity of domestic septage applied to each site;

4. The crop or vegetation grown on each site;

5. The rate in gallons per acre per year at which domestic septage is applied to each site;

6. A description of how management requirements for pathogen control and vector reduction requirements are met;

7. The name of the individual or company and signature of the person who land applied the domestic septage; and

8. The following certification statement shall be signed by a Level II Department of Human Resources Certified Pumper supervising the land application of domestic septage at the site: "I certify, under penalty of law, that the pathogen control requirements under 290-5-25-.07 and the vector reduction requirements under 290-5-25-.06 have been met. This determination has been made under my direction and supervision. I am aware that there are significant penalties for false certification including the possibility of fine or imprisonment."

Authority O.C.G.A. 31-2-8. Adopted Feb. 26, 2003; effective Mar. 18, 2003.

290-5-25-.11. Compliance.

1. **Operation.** A land application site shall not operate until such time as the appropriate application has been submitted and the County Board of Health has issued a valid permit.

2. **Inspection.**

(a) The County Board of Health shall conduct a minimum of two inspections of the land application site annually and review application records to determine compliance with provisions of these regulations.

(b) Representatives of the County Board of Health, after providing proper identification, shall be authorized to enter any property permitted as a land disposal site at any reasonable time for the purpose of making inspections to determine compliance with this Chapter. Should access be denied, an inspection warrant may be obtained as authorized in O.C.G.A. §31-5-2 et seq.

3. **Suspension or Revocation.** The County Board of Health shall have the power and authority to suspend or revoke permits for failure to comply with the provisions of this Chapter. When an application for a permit is denied or the permit previously granted is revoked, the applicant or holder thereof shall be afforded notice and hearing as provided in O.C.G.A. §31-5-1 et seq. If an application is denied or a permit is suspended or revoked, the applicant or holder of the permit must be notified in writing of any and all reasons why the action was taken. The purpose of these procedures is to state the minimum actions to be taken to fulfill the obligation of the County Board of Health in assuring compliance with the regulations when the continued operation of the land disposal site presents a substantial and imminent health hazard to the public or when a land disposal site is in flagrant violation or continuing violation of this Chapter. Suspension is effective upon service of a written notice and operation must cease immediately. If a hearing is not requested, upon correction of all violations, the permit holder may request an inspection to reinstate the permit.

4. **Notice of hearing.** For the purpose of this Chapter, a notice of hearing is properly served when delivered in person or by registered or certified mail to the permit holder or authorized agent of the land application site.

5. **Enforcement.** The administration and enforcement of these rules shall be as prescribed in O.C.G.A. §31-5-1 et seq.

Authority O.C.G.A. 31-2-8. Adopted Feb. 26, 2003; effective Mar. 18, 2003.

Table 1

Practical Interpretive Chart of Soil Moisture for Various Soil Textures and Conditions

Available moisture in soil	Coarse texture soil	Moderately coarse texture soil	Medium textured soil	Fine and very fine textured soil
0 percent	Dry, loose, and single grained; flows through fingers	Dry and loose; flows through fingers	Powdery dry; in some places slightly crusted but breaks down easily into powder	Hard, baked and cracked; has loose crumbs on surface in some places
50% or less	Appears dry, does not form a ball under pressure*	Appears dry and does not form a ball under pressure	Crumbly but holds together under pressure	Somewhat pliable; balls under pressure
50% to 75%	Appears dry, does not form a ball under pressure	Balls under pressure but seldom holds together	Forms a ball under pressure; somewhat plastic; sticks slightly under pressure	Forms a ball; ribbons out
75% to field capacity	Sticks together slightly; may form a very weak ball under pressure	Forms weak ball that breaks easily; does stick	Forms ball; very pliable; sticks readily if high in clay	Ribbons out easily; has a slick feel
At field capacity (100%)	On squeezing, no free water appears on soil but wet outline of ball is left on hand	Same as coarse textured soil	Same as coarse textured soil	Same as coarse textured soil
Above field capacity	Free water appears when soil is bounced in hand	Free water is released when kneading	Free water can be squeezed out	Puddles, free water forms on surface

From the United States Department of Agriculture, Natural Resource Conservation Service, National Engineering Handbook (Section 15, Irrigation).

* A ball is formed by squeezing a handful of soil very firmly.

Table 2

Land Application Pollutant Limits for Domestic Septage

Pollutant	Annual Pollutant Loading Rate Limits (kilograms per hectare per 365-day period)	Cumulative Pollutant Loading Rate Limits (kilograms per hectare)
Arsenic	2.0	41
Cadmium	1.9	39
Chromium	150	3,000
Copper	75	1,500
Lead	15	300
Mercury	.85	17
Nickel	21	420
Selenium	5.0	100
Zinc	140	2,800

The following formula can be used to convert ppm to Kg/Hectare: ppm X 1.12 = Kg/Hectare
1 Kg = 2.2 lbs
1 Hectare = 2.5 acres