

***INTERIM SEWAGE DISPOSAL
REGULATIONS***



**CLARK COUNTY COMBINED HEALTH
DISTRICT**

Division of Environmental Health

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Clark County Combined Health District Interim Sewage Disposal Regulations

Clark County Combined Health District Interim Sewage Disposal Regulations Chapter 29

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29-01 Definitions.

As used in sections 29-01 to 29-21 of the Clark County Combined Health District Interim Sewage Regulations and 3701-29-01 to 3701-29-21 of the Administrative Code:

- (A) "Aerobic type treatment system" means any system which utilizes the principle of oxidation in the decomposition of sewage by the introduction of air into the sewage or by surface absorption of air for a sufficient period of time to effect adequate treatment.
- (B) "Alter" means to change by making substantive replacements of, additions to, or deletions in the design, or materials or to change the location of an existing sewage treatment systems. For the purposes of this chapter, the terms "alter" or "alteration" shall not include the replacement of an existing sewage treatment system or the repair of a sewage treatment system by making minor corrections to existing components or substituting parts of a component with like parts as would occur during the servicing and maintenance of a sewage treatment system.
- (C) "Bedrock, rock and other fragments" means bedrock underlying the soil or exposed at the surface of the ground and rock and other fragments that are discrete particles greater than two millimeters including, but not limited to, gravel, cobbles, flagstones, stones and boulders. For the purposes of this chapter, a limiting condition shall include soils having bedrock, rock or other fragments greater than fifty per cent by volume.
- (D) "Bedroom" means any room within a dwelling that might reasonably be used as a sleeping room including but not limited to rooms designated as a den, office, or study.
- (E) "Board of health" means the board of health of a city or general health district, or the authority having the duties of a board of health in any city as authorized by section 3709.05 of the Revised Code.
- (F) "Building drain" means that part of the lowest horizontal piping of a building drainage system which receives the discharge from soil, waste, and other drainage pipes inside the walls of any building, and conveys such discharge to the building sewer three feet outside the building wall.
- (G) "Building sewer" means that part of the horizontal piping of a drainage system which receives and conveys the discharge from the building drain to the public sanitary sewer, private sanitary sewer, household sewage disposal system, or other points of disposal.
- (H) "Curtain drain" means a subsoil drain that prevents the entrance of ground water into the area of the household sewage disposal system.

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- (I) "Dwelling" means any building or place used or intended to be used by human occupants as a single family, two family, or three family residence.
- (J) "Easily accessible" means of such location and design as to permit exposure with the use of only simple tools, such as screwdriver, pliers, open-end wrench, or other simple tools supplied by the manufacturer.
- (K) "Filter" means any device or material which separates matter in suspension from a liquid.
- (L) "Health commissioner" means the health commissioner of a city or general health district or his authorized representative.
- (M) "Household sewage disposal system" means any sewage disposal or treatment system or part thereof for a single family, two family, or three family dwelling which receives sewage.
- (N) "Infiltrative surface" means the contact area where sewage is applied to the soil or sand fill for the purpose of treatment and/or dispersal.
- (O) "In situ soil" means soil that has been naturally deposited or formed in its present location with adequate texture, structure and consistence necessary for treatment and/or dispersal, or in the case of reclaimed or filled areas, has had sufficient time to form the texture, structure and consistence necessary for treatment and/or dispersal.
- (P) "Installer" means any person who installs or is in the business of installing a household sewage disposal system or part thereof.
- (Q) "Leaching system" means that part of a household sewage disposal system used to dissipate the effluent from a sewage tank by means of evaporation, transpiration, soil absorption, soil percolation. Or any combination thereof.
- (R) "Leaching pit" means any covered pit with lining designed to permit effluent from a sewage tank to seep into the surrounding soil.
- (S) "Limiting condition" means a restrictive soil layer, bedrock, ground water, a perched seasonal high water table or other condition or combination of conditions that severely limit the treatment and/or dispersal of sewage or effluent.
- (T) "Linear loading rate (LLR)" means the volume of effluent applied daily along the landscape contour expressed in gallons per day per linear foot. The LLR may also be referred to as the hydraulic linear loading rate. The LLR is used to determine the required length of the distribution system parallel to surface contours.

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- (U) "Lot" means the land area used or intended to be used as a single family, two family, or three family dwelling site.
- (V) "Normal ground water table" means the shallowest depth of soil which is saturated with water for an extended or permanent time period.
- (W) "Perched seasonal high water table" means the shallowest depth of soil which is saturated with water above an unsaturated zone for at least three weeks or longer periods of time, often with repeated occurrences during the winter and/or spring seasons of the year.
- (X) "Person" means the state, any political subdivision, public or private corporation, partnership, firm, association, individual, or other entity.
- (Y) "Point of discharge" means the point at which the effluent from a household sewage disposal system or curtain drain enters a public ditch or discharges to the surface of the ground or to a body of water.
- (Z) "Pollution" means the placing of any noxious or deleterious substance in any waters of the state or affecting the properties of any waters of the state in a manner which renders such waters harmful or inimical to the public health, or to animal or aquatic life, or to the use of such waters for domestic water supply, or industrial or agricultural purposes, or for recreation.
- (AA) "Pressure distribution" means dispersal of effluent in a manner that assures no more than a ten per cent difference in flow rate between the proximal and distal orifices on each distribution lateral and within the total distribution network.
- (BB) "Privy" means any sanitary, waterless device for the collection and storage of human excreta but does not include chemical commodes or other portable receptacles.
- (CC) "Public health nuisance" means any condition of sewage or effluent that is potentially injurious to the health and safety of a person. A public health nuisance shall be deemed to exist when the conditions set forth in paragraph (F) (1) of rule 3745-1-04 of the Administrative Code are demonstrated.
- (DD) "Replacement" means the installation of a new sewage treatment system to replace an existing system.
- (EE) "Restrictive soil layer" means a compacted or dense soil layer such as a fragipan, a soil layer with a brittle and firm or very firm consistence, a soil layer having a massive structure or having a platy structure inherited from bedrock or other soil layer similarly restricting vertical flow.

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- (FF) "Sanitary sewerage system" means any public or community sewerage collection system conveying sewage to a central sewage treatment plant.
- (GG) "Secured cover" means a removable cover or manhole that prohibits unwarranted or unauthorized removal.
- (HH) "Septic tank" means any watertight, covered receptacle designed and constructed to receive the discharge of sewage from a building sewer, and to discharge the effluent from settled sewage.
- (II) "Sewage" means any liquid waste containing animal or vegetable matter in suspension or solution from water closets, urinals, lavatories, bathtubs, laundry tubs or devices, floor drains, drinking fountains, or other sanitary fixtures, and may include liquids containing chemicals in solution.
- (JJ) "Sewage tank" means any watertight tank designed to retain sewage and includes, but is not limited to, septic tanks and aerobic type treatment tanks.
- (KK) "Sewage tank cleaner" means any person who engages in the collection, transportation, and disposal of the contents of sewage tanks, or privies.
- (LL) "Soil depth credit" means the use of the design mechanisms of elevation, pretreatment, and/or distribution as substitutes for in situ soil treatment to compensate for inadequate vertical separation distance between the infiltrative surface and the limiting condition.
- (MM) "Soil loading rate" means the daily volume of effluent applied per unit area of in situ soil expressed in gallons per day per square foot. The "soil loading rate" may also be referred to as the basal loading rate or the infiltration loading rate. The "soil loading rate" determines the size of the soil absorption area. The "soil loading rate" and the LLR determine the dimensions of the soil absorption area.
- (NN) "Subdivision" means that which is defined by section 711.001 of the Ohio Revised Code.
- (OO) "Timed dosing" means a mechanism that attenuates flows resulting from high water use periods and allows for controlled dosing intervals through use of a timing device.
- (PP) "Vertical separation distance" means the depth from the infiltrative surface of the distribution system of the soil absorption component to a limiting condition.

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29-02 Sewage disposal requirements.

- (A) The design, construction, installation, location, maintenance, and operation of household sewage disposal systems including, but not limited to, septic tanks, aerobic type treatment systems, filters, leaching tile fields, leaching walls, building sewers, and privies or parts thereof shall comply with these regulations and engineering practices acceptable to the Ohio department of health and current Ohio environmental protection agency effluent standards.
- (B) Any dwelling which is not connected to a sanitary sewerage system shall be provided with an approved household sewage disposal system, prior to its being occupied.
- (C) Each household sewage disposal system shall serve one dwelling on an individual lot and shall be properly maintained and operated by the owner. All the sewage from the dwelling shall discharge into the system.
- (D) No household sewage disposal system or part thereof shall create a public health nuisance.
- (E) No person shall discharge, or permit to be discharged, treated or untreated sewage, the overflow drainage or contents of a sewage tank, or other putrescible, impure, or offensive wastes into an abandoned water supply, well, spring, or cistern or into a natural or artificial well, sink hole, crevice, or other opening extending into limestone, sandstone, shale, or other rock formation, or normal ground water table.
- (F) No person shall discharge, or permit or cause to be discharged, treated or untreated sewage, the drainage or contents of a sewage tank, or other putrescible or offensive wastes onto the surface of the ground, into any street, road, alley, open excavation, or underground drain.
- (G) Off-lot disposal of sewage effluent shall not be permitted except where the installation of an on-lot disposal system is not possible, as specified in rules 3701-29-10(A), 3701-29-10(B), and 3701-29-11(B) of the Administrative Code, and the following conditions are met:
 - (1) When off-lot disposal of sewage effluent requires the crossing of adjacent properties to reach the point of discharge a recorded easement or the use of a legally established, publicly maintained drainage improvement from the dwelling lot line to the point of discharge shall be required.
 - (2) Written permission to discharge sewage effluent from the person or persons in control of the property or properties at the point of discharge shall be required.
 - (3) Sewage effluent quality as measured at the point of discharge in the system shall comply with current effluent standards established by the director of the Ohio

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environmental protection agency. In the event there are no applicable standards established by the director of the Ohio environmental protection agency, the following effluent standards shall apply:

- (a) Biochemical oxygen demand (five-day) - The arithmetic mean of two or more effluent samples taken at intervals of not less than twenty-four hours shall not exceed twenty milligrams per liter.
- (b) Suspended solids - The arithmetic mean of two or more effluent samples taken at intervals of not less than twenty-four hours shall not exceed forty milligrams per liter.
- (4) When test results indicate that the standards set forth in paragraph (G)(3) of this regulation are not being met or public health nuisances are being created, additional treatment devices may be required by the board of health.
- (5) All reasonable means shall be taken to minimize the amount of effluent discharged off the lot.
- (6) The discharge is authorized by an NPDES permit issued under Chapter 6111 of the Revised Code.
- (H) Lots on which household sewage disposal systems for dwellings are to be installed shall be of suitable topography and area to permit compliance with rules 3701-29-01 to 3701-29-21 of the Administrative Code.
- (I) A suitable area shall be available to provide for the complete relocation and replacement of the household sewage disposal system as required by rules 3701-29-01 to 3701-29-21 of the Administrative Code.
- (J) Lots on which private water supplies are to be installed shall be of sufficient area to provide isolation of the water supply system from both the original household sewage disposal system and the area intended for any relocation and replacement on this or adjacent lots as required by rules 3701-29-01 to 3701-29-21 of the Administrative Code.
- (K) A household sewage disposal system shall be a minimum of ten feet from any lot or right-of-way line, ten feet from any occupied building, ten feet from any water service line, and one hundred feet from any water supply source on this or any adjacent lot.
- (L) No household sewage disposal system shall be installed, maintained, or operated on property accessible to a sanitary sewerage system.

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- (M) Whenever a sanitary sewerage system becomes accessible to the property, a household sewage disposal system shall be abandoned and the house sewer directly connected to the sewerage system.
- (N) Roof water, foundation drain, cistern overflow, surface drainage, and subsurface drainage shall not be discharged into a household sewage disposal system.
- (O) Plastics in any form, wet-strength paper towels, cloth of any kind, rubber products, throw-away baby diapers, cigarette stubs, sand, grit, coffee grounds, excess cooking oils or greases, solvents, paints, caustic or oily liquids or materials, kerosene, gasoline, motor oil, floor waxes or any other wastes known to adversely affect the household sewage disposal system shall not be deposited or flushed in plumbing fixtures nor shall they otherwise be introduced into a building sewer or household sewage disposal system.
- (P) In cases where the board of health has provided written approval for a household sewage disposal system prior to the effective date of this regulation, the board of health shall permit the installation of the household sewage disposal system under the following conditions:
 - (1) There is written documentation of the household sewage disposal system approval by the board of health and the written approval has not expired.
 - (2) The household sewage disposal system shall not conflict with provisions of the NPDES program established in section 6111.03 of the Revised Code or rules adopted or permits issued pursuant to section 6111.03 of the Revised Code.
 - (3) The owner obtaining an installation permit requests to install the previously approved household sewage disposal system.
 - (4) The installation permit for the household sewage disposal system is issued by the board of health prior to the first day of January 2012.
 - (5) Other than the siting and household sewage disposal system specifications previously approved by the board of health, the provisions of this regulation shall apply.

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29-03 Subdivisions.

- (A) Any person proposing to create a subdivision shall submit to the board of health, for approval, plans clearly showing that the provisions of rules 3701-29-01 to 3701-29-21 of the Administrative Code can be adequately met, before any of the lots in the subdivision are sold or offered for sale, whether or not such sale entails a transfer of title or deed.
- (B) No person shall install household sewage disposal systems in new subdivisions, unless it is considered to be impracticable or inadvisable by the board of health and the Ohio environmental protection agency to install a central sewage system.
- (C) If household sewage disposal systems are proposed, the plans shall show:
 - (1) The total land area to be used;
 - (2) Location and size of all lots;
 - (3) The properties and characteristics of the soils in the subdivision;
 - (4) Depth to normal ground water table and rock strata;
 - (5) Location of all bodies of water, streams, ditches, sewers, drain tile, existing and proposed potable water supply sources and lines on this or adjacent lots within one hundred feet of the proposed subdivision, or any other information which may affect the installation or operation of household sewage disposal systems or the enforcement of rules 3701-29-01 to 3701-29-21 of the Administrative Code;
 - (6) Existing and finished grade of all lots.
- (D) If the proposed subdivision is to be served by either a sanitary sewerage system or a water supply system or both, plans shall be submitted to the Ohio environmental protection agency as required by section 6111.44 of the Revised Code.

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29-04 Installation permit and operation permit.

- (A) No person shall install or alter a household sewage disposal system without an installation permit issued to him by the board of health. The owner or his designated agent shall obtain such installation permit from the board of health for the installation of a household sewage disposal system prior to the start of construction of a dwelling.
- (B) No person shall maintain or operate a household sewage disposal system installed after the effective date of this regulation without an operation permit obtained from the board of health.
- (C) Application for permit shall be in writing and contain pertinent information as required by the board of health. Any fee established for a permit by law or authority of law shall accompany the application.
- (D) The board of health shall issue a permit when the pertinent information indicates that the provisions of rules 3701-29-01 to 3701-29-21 of the Administrative Code can be met. The board of health may specify terms consistent with rules 3701-29-01 to 3701-29-21 on the permit governing the installation, alteration, and operation of the household sewage disposal system.
- (E) The board of health shall deny a permit if the information on the application is incomplete, inaccurate, or indicates that the provisions of rules 3701-29-01 to 3701-29-21 of the Administrative Code cannot be met.
- (F) An installation permit shall remain in force until completion of the household sewage disposal system or for one year from the date of issuance, whichever occurs first. The permit may be revoked or suspended by the board of health. An operation permit shall remain in force until it expires, is revoked, or suspended by the board of health.
- (G) The installation and operation of the household sewage disposal system or any part thereof shall conform with the requirements of rules 3701-29-01 to 3701-29-21 of the Administrative Code and the terms of the permit as required by the board of health in division (D) of this regulation.
- (H) Prior to the issuance of a permit to install a household sewage disposal system for a new dwelling, each property owner or designated agent shall demonstrate to the health commissioner that an area where a septic tank and leaching tile field can be installed exists upon the property under consideration by providing the satisfactory results of a soil analysis. Persons whose qualifications are acceptable to the health commissioner shall perform the analysis.
- (I) Each application for a permit to install a household sewage disposal system for a new dwelling shall be accompanied by a scaled sanitation plot plan detailing the location

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of lot lines, water supplies, drainage ditches, streams, lakes, ponds, the proposed location of the house, driveway and auxiliary structures, and any other information the health commissioner may require. The sanitation plot plan shall be prepared on an accurate topographic map and shall detail the elevation for all components of the household sewage disposal system and the top of the foundation of the structure.

- (J) Prior to the issuance of a permit to install, replace, or alter a household sewage disposal system for an existing dwelling, each property owner or designated agent shall contact the Clark County Combined Health District for a design layout of the sewage disposal system. When possible the installation, replacement or alteration of a household sewage disposal system for an existing dwelling shall be equivalent to that which is required for a new dwelling.

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29-05 Registration of installers of household sewage disposal systems or parts thereof.

- (A) No person shall perform the services of an installer unless he holds a valid registration issued to him by the board of health.
- (B) Application for registration shall be in writing and contain pertinent information as required by the board of health. Any fee established for a registration by law or authority of law shall accompany the application.
- (C) Each registration issued hereunder shall expire annually.
- (D) A renewal application for registration shall be submitted to the board of health at least thirty days prior to the expiration date.
- (E) Every registrant shall maintain and submit to the board of health such data and records as may be required for determining compliance with rules 3701-29-01 to 3701-29-21 of the Administrative Code.
- (F) The owner shall not be required to have a registration for performing work on the household sewage disposal system for the dwelling which he occupies.
- (G) Whenever the health commissioner finds that an installer is or has engaged in practices which are in violation of any provision of rules 3701-29-01 to 3701-29-20 of the Administrative Code or the terms of any permit as required by the board of health in rule 3701-29-04(D) of the Administrative Code and paragraph 29-04 (D) of these regulations under which installation is performed, the board of health shall give notice in writing to the registrant describing the alleged violation and state that an opportunity for a hearing will be provided by the board of health to show cause why his registration should not be suspended or revoked.

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29-06 Registration of sewage tank cleaners.

- (A) No person shall perform the services of a sewage tank cleaner unless he holds a valid registration issued to him by the board of health.
- (B) Application for registration shall be in writing and contain pertinent information as required by the board of health. Any fee established for registration by law or authority of law shall accompany the application.
- (C) The board of health shall issue a permit when the pertinent information indicates that the provisions of rules 3701-29-01 to 3701-29-21 of the Administrative Code can be met. The board of health may specify terms consistent with rules 3701-29-01 to 3701-29-21 on the permit governing the collection, transportation, and disposal of the contents of sewage tanks or privies.
- (D) Each registration issued hereunder shall expire annually.
- (E) A renewal application for registration shall be submitted to the board of health at least thirty days prior to the expiration date.
- (F) Every registrant shall maintain and submit to the board of health such data and records as may be required for determining compliance with rules 3701-29-01 to 3701-29-21 of the Administrative Code.
- (G) Whenever the health commissioner finds that a sewage tank cleaner is or has engaged in practices which are in violation of any provision of rules 3701-29-01 to 3701-29-21 of the Administrative Code or 29-01 to 29-21 of these regulations, the terms of the registration permit as required by the board of health in rule 3701-29-06(C), or in paragraph 29-06 (C) of these regulations or applicable laws of the state, the board of health shall give notice in writing to the registrant describing the alleged violation and state that an opportunity for a hearing will be provided by the board of health to show cause why his registration should not be suspended or revoked.
- (H) Sewage tank contents disposed of by land application methods must be disposed of in compliance with paragraph (B) of section 29-06.1 of this regulation.

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29-06.1 Residuals management.

This regulation includes the requirements for the management of Sewage Treatment System (STS) residuals and the collection, transportation, disposal, and land application of domestic septage. The land application requirements in this regulation are in addition to those in 40 C.F.R. 503 (as published in the July 1, 2005 Code of Federal Regulations).

(A) The Clark County Combined Health District Board of Health shall assess the management of STS residuals generated within its jurisdiction, including adequate capacity for the disposal of STS residuals and/or land application of domestic septage within the area of its jurisdiction. Residuals management by the Board of Health shall include but is not limited to the following:

- (1) Notification to sewage tank cleaners registered by the board of health of available receiving locations for STS residuals and any prohibitions on the land application of domestic septage. Compliance with paragraph (B) of this regulation is required when land application is permitted by the board of health.
- (2) Provision of information to STS owners on recommended time lines for removal of residuals from STS components including more frequent removal when a garbage disposal is in use. Information may also be provided as applicable for the management of grease interceptor waste when the board of health has authority for SFOSTS.
- (3) Requirements for reporting of residuals removal or tank pumping as applicable when required as a condition of an operation permit or as necessary to demonstrate compliance with this chapter.

(B) Land application of domestic septage shall not create a public health nuisance and shall be performed for agronomic benefit in compliance with this paragraph and 40 C.F.R. 503 (as published in the July 1, 2005 Code of Federal Regulations) on sites approved by the board of health.

- (1) A land application site may be considered for approval by the board of health if the following is provided by the registered sewage tank cleaner:
 - (a) Written permission from the property owner to land apply septage and information on the presence of any field tile within the proposed land application site.
 - (b) Information from an order two soil survey indicating that the site has a slope no greater than eight per cent, has at least three feet of soil above ground water, bedrock, rock and other fragments, and is free of conditions that could allow land application of septage to cause contamination of ground water or run off to surface waters.

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- (c) A completed written application for land application of septage on a form approved by the health commissioner. The form shall require information concerning the site, the surrounding area, and land application methods used by the registered sewage tank cleaner. A non refundable fee established by the board of health shall accompany each application for land application of septage.
- (2) The board of health shall conduct a site inspection prior to approval and shall enforce the prohibitions in this paragraph. Land application of domestic septage is prohibited within the sanitary isolation radius of a public water system well as determined in accordance with rule 3745-9-04 of the Ohio Administrative Code. Land application of domestic septage is also prohibited within an inner management zone of a drinking water source protection area determined to be highly susceptible to contamination by the OEPA source water protection and assessment program for a community or non-transient non-community public water system as defined in rule 3745-81-01 of the Ohio Administrative Code. The area to be used for land application shall meet the following minimum horizontal isolation distances:
- (a) Two hundred feet from any dwelling, business, or location used for community gatherings or recreational purposes.
 - (b) Fifty feet from any property line.
 - (c) One hundred feet from any private water system, non-potable water well or water supply well used by a transient, non-community public water system as defined in rule 3745-81-01 of the Ohio Administrative Code.
 - (d) Fifty feet from any waters of the state excluding ground water but including grass waterways.
 - (e) Three hundred feet from a sinkhole or drainage well, or one hundred feet if a permanent vegetative buffer is maintained round the sinkhole or drainage well.
 - (f) Fifteen hundred feet from a public drinking water surface water intake.
- (3) The amount of septage applied to the site shall not exceed the annual nitrogen application rate required for the type of vegetation on the site. The soil shall be tested every two years for phosphorus and shall not exceed the recommended levels for agronomic loading rates. Any vegetation or crop grown on the application site shall be harvested, grazed, or otherwise removed in accordance with 40 C.F.R. 503 (as published in the July 1, 2005 Code of Federal Regulations).

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- (4) Trash shall be screened and removed from the septage prior to land application and shall be dewatered prior to disposal as solid waste.
- (5) Septage shall be land applied in accordance with the following:
 - (a) Septage shall not be permitted to pool or flow on the surface of the ground.
 - (b) Septage shall be applied in accordance with the vector attraction reduction requirements and the pathogen reduction requirements of 40 C.F.R. 503 (as published in the July 1, 2005 Code of Federal Regulations).
- (6) Records shall be maintained by the sewage tank cleaner for at least five years to demonstrate compliance with this regulation and the requirements of 40 C.F.R. 503 (as published in the July 1, 2005 Code of Federal Regulations).

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29-07 Septic tanks, Dosing tanks, and Controls

- (A) The minimum capacity of septic tanks shall be:
- (1) Single family dwelling;
 - (a) One to two bedroom - 1000 gallons;
 - (b) Three bedroom - 1500 gallons in one or two tanks or compartments;
 - (c) Four to five bedroom - 2000 gallons in two tanks or compartments;
 - (d) Six or more bedroom - 2500 gallons in two tanks or compartments.
 - (2) Two or three family dwelling - the sum of the volumes for each single family residential unit within the dwelling as defined by rule paragraph 29-07(A)(1).
- (B) In systems using two tanks, the septic tanks shall be connected in series and all sewage shall initially enter the first tank.
- (C) The invert level of the inlet shall be not less than two inches above the liquid level of the tank.
- (D) A vented inlet baffle shall be provided to divert the incoming sewage downward. The baffle shall penetrate at least six inches below the liquid level, but the penetration shall not be greater than that allowed for the outlet device.
- (E) The outlet shall be fitted with a vented tee, vented ell, or baffle which shall extend not less than six inches above and not less than eighteen inches below the liquid level of the tank, and shall include an effluent filter device that retains solids greater than one sixteenth of an inch in size.
- (F) The septic tank shall have a liquid drawing depth of not less than four feet.
- (G) The distance from the flow line to the cover shall be at least twelve inches.
- (H) The septic tank access openings shall be located above the inlet and outlet of the tank and shall allow adequate space for pumping of the tank and inspection and maintenance. An access opening and cover shall be provided above the compartment wall in a two compartment tank unless the transfer port in the center wall is a pass through opening that allows a shared liquid level in both compartments. The cover or riser lid shall weigh a minimum of sixty-five pounds or be secured against unauthorized access.

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- (I) The tank shall be installed with a minimum of two watertight risers extended to grade or above grade to provide access to the inlet and outlet of the tank. The connection of the riser to the tank and the connection of additional riser sections shall incorporate joint grooves or adapters to prevent lateral movement of the riser. Riser lids shall prevent infiltration of water and have secured covers.
- (J) The septic tank shall be installed, bedded, and backfilled in accordance with manufacturer specifications to assure the structural integrity of the tank. The tank shall be level. To allow for ease of access, the septic tank shall be installed no deeper than two feet below grade unless the terms of the installation permit allow for greater septic tank depth and the tank is designed to withstand the additional load.
- (K) Dosing tanks shall be designed and manufactured in accordance with the following:
- (1) Dosing tanks shall be easily accessible and have secured covers.
 - (2) Dosing tanks shall be selected to accommodate the volume below maximum drawdown, the maximum design dose including any drainback, and the design portion of the reserve and surge capacities as applicable. The design shall provide a reserve capacity for high water alarm events and be no less than 300 gallons in capacity. If time dosed, the design shall accommodate combined reserve and surge capacities of not less than one hundred and fifty per cent of the daily design flow.
- (L) Pumps shall meet the following specifications:
- (1) A pump shall be rated for effluent service by the manufacturer and be a UL or CSA listed product.
 - (2) The pump shall be properly sized to meet the design flow rate and total dynamic head requirements specified for the system.
 - (3) A quick disconnect shall be accessible in the pump discharge piping, with adequate lift attachments provided for removal and replacement of the pump and water level control assembly without having to either enter the dosing tank or pump the tank to lower the liquid level.
- (M) Switches, controls, alarms, and electrical components shall be UL or CSA listed products, shall be installed in a manner easily accessible for routine monitoring and maintenance, and shall comply with the following:
- (1) Switches and controls shall accommodate the minimum and maximum dose capacities of the specified distribution component.
 - (2) An elapsed time meter, counter, and/or flow meter shall be included in those systems having any dosing component. Time dosed system shall include flow

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meters, counters, and control panels with programmable timers, manual pump operation, test features, and as applicable, adjustable override settings for high water alarm conditions.

(3) Controls shall have both audible and visual alarms. Alarms and controls shall be on a separate frequently used circuit from dedicated circuits for each pump or motor. The board of health may require that the alarm be located in closer proximity to the dwelling or structure when the system location is remote.

(4) Control panels and alarms shall be mounted in an easily accessible exterior location, shall be field-tested to assure compliance with the system specifications, and shall include written instructions related to standard operation and alarm events.

(N) The installer shall assure that all electrical wiring meets the national electric code.

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29-08 Aerobic type treatment system.

- (A) Aerobic type treatment systems shall comply with standard number forty as adopted by the national sanitation foundation board of trustees or standards accepted as equivalent by the Ohio department of health relating to materials, design, construction, performance, operation, maintenance, and safety of the system in effect at the time of acceptance of a system by the Ohio department of health, and the requirements of rules 3701-29-01 to 3701-29-21 of the Administrative Code.
- (B) In addition to division (A) of this regulation, aerobic type treatment systems shall comply with the following requirements:
- (1) Where a final effluent sample cannot easily be obtained from within the system, a sampling well immediately following the system shall be provided. The sampling well, with a minimum inside diameter of eight inches, shall be accessible from the surface of the ground, and shall be provided with a secured cover.
 - (2) The system shall be sized on the basis of one hundred-twenty gallons per day per bedroom.
 - (3) The system shall not be installed where the estimated daily flow exceeds the rated capacity at which the system was tested and approved.
- (C) An aerobic type treatment system may be permitted under the conditions provided in paragraph 29-02(G) of these regulations for off-lot discharge, or in conjunction with a leaching tile field, or other means approved by the Ohio department of health and the Ohio environmental protection agency under their general permit authorization to discharge wastewater from selected new and replacement household sewage treatment systems to prevent water pollution or a nuisance.
- (D) Prior to off-lot discharge the effluent from an aerobic type treatment system shall discharge through a filter conforming to the requirements of rules 3701-29-09 or 3701-29-14 of the Administrative Code, or other device approved by the Ohio department of health to provide additional treatment so that the requirements of paragraph 29-02(G)(3) of these regulations will not be exceeded.

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29-09 **Surface sand filter following an aerobic type treatment system.**

When a surface sand filter is used as a component of an aerobic type treatment system it shall comply with the following requirements:

- (A) The surface sand filter shall have a minimum filter area of thirty square feet.
- (B) The effective size of the filter sand shall be six-tenths to one millimeter with a uniformity coefficient not to exceed three.
- (C) The minimum depth of the filter sand shall be eighteen inches.
- (D) A minimum of twelve inches of freeboard above the upper sand surface shall be provided.
- (E) The effluent shall be distributed over the entire sand filter area.
- (F) Dosing devices, if required, shall be provided with a pump having a minimum capacity of 3.75 gallons per minute.
- (G) The sump for the dosing device shall have a minimum working volume of seventy-five gallons.
- (H) The sand filter shall be covered with durable grating constructed of materials resistant to corrosion and decay, or surrounded by a fence to prohibit unwarranted or unauthorized entry.
- (I) A sampling well with a minimum inside diameter of eight inches shall be installed on the surface sand filter discharge line within six feet of the filter bed, accessible from the surface of the ground, and provided with a secured cover.

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29-10 Installation requirements for soil absorption and percolation.

- (A) Leaching systems utilizing soil absorption or percolation shall not be permitted where the depth to bedrock is less than four feet below the bottom of the proposed system.
- (B) Leaching systems utilizing soil absorption or percolation shall not be installed where the texture, structure, or permeability of the soil is not suitable to provide internal drainage or treatment. The health commissioner may require the owner at the owner's expense to provide a written site evaluation by a qualified person before a final decision is made in issuing a permit. The criteria of the national cooperative soil survey shall be used as a guideline by the health commissioner to determine the suitability of the soils in lieu of a more detailed guideline relating to code requirements and soil characteristics.
- (C) No soil absorption system shall be installed within two feet of a seasonally high or normal ground water table.
- (D) A minimum vertical separation distance of one foot of in situ soil shall be maintained. A soil depth credit may be applied to a vertical separation distance established in paragraphs (A) and (C) of this regulation through the use of soil depth credits. A one foot soil depth credit shall be achieved through the use of infiltrative surface elevation, pretreatment pathogen reduction and/or timed micro-dosed distribution.

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29-11 Leaching tile field.

- (A) Total field requirement shall be divided into two equal sections and provided with a diversion device equipped to provide alternate flow to each section of the field.

The diversion device and inspection ports shall be brought to grade and shall be provided with secured covers.

- (B) Leaching field absorption area requirements for household sewage disposal systems shall be adequate to prevent water pollution or a nuisance, except those sites eliminated by rules 3701-29-01 to 3701-29-21 of the Administrative Code.
- (C) The minimum distance between any leaching lines shall be six feet.
- (D) The minimum distance between any leaching line and any drain line located on the lot shall be eight feet.
- (E) A leaching trench shall have a minimum of eighteen inches of clean gravel or stone fill, extending at least two inches above and twelve inches below the leaching line; such fill shall be three-fourths inch to one and one-half inches in size.
- (F) A leaching trench shall have a minimum width of thirty-six inches. The depth shall be a minimum of eighteen inches but not more than thirty inches.
- (G) A leaching line shall have a maximum length of one hundred-fifty feet.
- (H) A leaching line shall have a minimum diameter of four inches and shall have a relatively level grade. The grade shall not exceed a fall of three inches in fifty feet.
- (I) The top of the gravel stone fill shall be covered with a pervious material such as untreated paper or a two inch layer of hay, straw, or similar material before being covered with earth.
- (J) The land surface shall be graded so as to exclude surface drainage from the household sewage disposal site.
- (K) A leaching field shall be a minimum of 500 lineal feet.

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29-12 Curtain drain.

- (A) A curtain drain shall be provided in soil subject to a seasonally high ground water table. The curtain drain shall be installed not less than six inches below the leaching trench bottom, and shall be at least eight feet from the center line of any leaching line.
- (B) A curtain drain shall have an inspection well accessible from the surface of the ground and shall be provided with a secured cover. The well shall have a minimum inside diameter of eight inches and shall be on the discharge line adjacent to the leaching system unless an open out-fall is present on the property.
- (C) When off lot disposal of curtain drain discharge requires crossing adjacent properties to reach the point of discharge a recorded easement or the use of a legally established, publicly maintained drainage improvement from the dwelling lot line to the point of discharge shall be required.

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29-13 Leaching pit.

- (A) A leaching pit shall be installed only in areas where gravel deposits underlie the ground surface and the seasonally high water table is not less than ten feet below the bottom of the leaching pit. Test borings to determine the suitability of the soil shall be constructed to a depth of at least ten feet below the bottom of a proposed leaching pit prior to issuance of an installation permit.
- (B) A leaching pit shall be a minimum of one hundred feet from any water supply source, ten feet from any lot or right-of-way line, and twenty feet from any occupied building.
- (C) A leaching pit shall be provided with a secured cover extended to ground level.

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29-14 Subsurface sand filter.

- (A) A subsurface sand filter shall be permitted only under the conditions provided in rule 3701-29-02(G) of the Administrative Code and paragraph 29-02 (G) of these regulations .
- (B) A subsurface sand filter shall have a minimum filter area of two hundred-forty square feet per bedroom unless the filter is dosed. When dosed the filter shall have a minimum filter area of three hundred square feet or one hundred twenty square feet per bedroom, whichever is greater. The total filter area shall be divided into two beds, each with a separate distribution system. Provision shall be made for alternating from one bed to the other by gravity or pumping.
- (C) A dosing tank shall have a minimum working volume of seventy-five gallons, shall extend to grade, and shall be provided with secured covers.
- (D) When a subsurface sand filter is dosed, the distribution system shall be vented to the surface of the ground at the lower end of each bed by one or more vented caps having a minimum inside diameter of four inches.
- (E) All distribution lines shall have a minimum diameter of four inches and shall have a relatively level grade. The grade shall not exceed a fall of three inches in fifty feet.
- (F) The distribution lines shall be installed within a minimum of twelve inches of clean gravel or stone three-fourths inch to one and one-half inches in size which covers the entire bed. The lines shall be laid on three foot centers, and eighteen inches from the sidewalls of the filter.
- (G) The filtering material shall be a minimum of eighteen inches in depth and the sand shall be an effective size of four-tenths to one millimeter with a uniformity coefficient not to exceed three.
- (H) The lower or collecting line shall have a minimum diameter of four inches and shall be laid the full length of the bed. The grade shall have a minimum fall of six inches in fifty feet.
- (I) The collecting line shall be installed within a minimum of twelve inches of clean gravel or stone three-fourths to one and one-half inches in size which underlies the entire bed.
- (J) The top of the filter shall be covered with a pervious material such as untreated paper or a two inch layer of hay, straw, or similar material before being covered with earth.
- (K) The earth cover shall not exceed eighteen inches.

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- (L) A sampling well with a minimum inside diameter of eight inches shall be installed on the subsurface sand filter discharge line within six feet of the filter bed, accessible from the surface of the ground, and provided with a secured cover.

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29-15 Privy.

- (A) A privy shall be provided with watertight vaults or other watertight receptacles of not less than five hundred gallons capacity except as specified in division (B) of this regulation and shall be a minimum of fifty feet from any water supply source, and twenty feet from any occupied building or lot or right-of-way line.
- (B) A vault may be constructed with an open or porous bottom if it is located not less than one hundred feet from any water supply source, and so located that the liquids leaching from the vault will not discharge at the ground surface, or into limestone, sandstone, shale, or other rock formation. The vault shall not be permitted where the depth to the seasonally high water is less than four feet below the bottom of the proposed vault.
- (C) The construction and design of the vault and superstructure shall prevent access by insects, fowl, or animals.
- (D) A privy shall be cleaned before the contents reach the top level of the vault.

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29-16 **Building sewer.**

- (A) A building sewer shall have a minimum diameter of four inches.
- (B) A building sewer shall be watertight and constructed of durable material, capable of withstanding a ten foot head of water test or equivalent.
- (C) Traps shall not be installed in a building sewer.
- (D) A building sewer shall be laid in good alignment and embedment at a uniform grade in accordance with engineering practices acceptable to the Ohio Department of Health.
- (E) A building sewer shall be a minimum of ten feet from any household water supply source and water service line.

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29-17 **Inspections.**

- (A) The health commissioner may at any reasonable time during the course of construction or any time thereafter inspect any household sewage disposal system or part thereof, sample the effluent, or take any other steps which he deems necessary to insure proper compliance with rules 3701-29-01 to 3701-29-21 of the Administrative Code and sections 29-01 to 29-21 of these regulations. The health commissioner may utilize inspection reports or other data submitted or obtained from reliable sources to determine compliance.

- (B) No household sewage disposal system or part thereof shall be covered or put into operation until the system has been inspected and approved by the health commissioner.

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29-18 Abandoned household sewage disposal system.

An abandoned household sewage tank shall be emptied and filled to the ground surface with suitable material.

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29-19 Hearing.

The board of health shall grant a hearing to any person affected or aggrieved by rules 3701-29-01 to 3701-29-21 of the Administrative Code or sections 29-01 to 29-21 of these regulations.

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29-20 Variance.

- (A) The board of health may grant a variance from the requirements of rules 3701-29-01 to 3701-29-21 of the Administrative Code or sections 29-01 to 29-21 of these regulations as will not be contrary to the public interest, where a person shows that because of practical difficulties or other special conditions their strict application will cause unusual and unnecessary hardship. However, no variance shall be granted that will defeat the spirit and general intent of said rules or regulations, or be otherwise contrary to the public interest.
- (B) Experimental systems may be installed under the provision of 3701-29-20(A) of the Administrative Code provided the director of health concurs in writing with the design and evaluation plan.
- (C) Household sewage disposal system components or household sewage disposal systems differing in design or principle of operation from those set forth in rules 3701-29-01 to 3701-29-21 of the Administrative Code, may qualify for approval as a special device or system; provided, comprehensive tests and investigations show any such component or system produces results equivalent to those obtained by sewage disposal components or systems complying with such regulations. Such approval shall be obtained in writing from the director of health.
- (D) Rules 3701-29-01 to 3701-29-21 of the Administrative Code are minimum standards. A board of health may adopt more stringent standards when local conditions indicate such standards are necessary.

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29-21 Small flow on-site sewage treatment system.

(A) "Small flow on-site sewage treatment system (SFOSTS)" means a system, other than a household sewage disposal system, that treats not more than one thousand gallons of sewage per day and that does not require a national pollutant discharge elimination system permit issued under section 6111.03 of the Revised Code or an injection well drilling or operating permit issued under section 6111.043 of the Revised Code. A structure or structures served by a SFOSTS shall include but is not limited to:

- (1) Vacation rental cabins with multiple cabins served by an SFOSTS.
- (2) A dwelling and an ancillary building both served by an SFOSTS where the ancillary building may be open to the public and is used by more than the residents of the dwelling.
- (3) Two dwellings, including arrangements such as a dwelling and a detached garage with living space.
- (4) A dwelling with a home business that may be open to the public, generates sewage in excess of the daily design flow or waste strength for an HSTS, and has no wastewater going to the SFOSTS other than sewage as defined in this regulation.

(B) Rules 3701-29-01 to 3701-29-21 of the Administrative Code apply to SFOSTS that are under the jurisdiction of a board of health in compliance with this paragraph.

- (1) The board of health has determined that all applicable provisions of the rules related to SFOSTS can be fully implemented under its authority.
- (2) The board of health has committed to maintaining the necessary resources to support implementation of all applicable rules.
- (3) The board of health has sent a letter of notification to the director of health and the director of environmental protection at least sixty days prior to the date when the board of health will assume authority for SFOSTS. The letter of notification shall include the intended date for transfer of jurisdiction and shall indicate compliance with paragraphs (B)(1) and (B)(2) of this rule.

It is recognized that certain design standards for SFOSTS authorized in Chapter 3701-29 of the Administrative Code differ from those standards for on-site systems regulated under Chapter 3745-42 of the Administrative Code due to operation permit requirements for SFOSTS in paragraph (E) of this rule. As such, differences in design standards between these two chapters of the Administrative Code should not be construed as a conflict of law.

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(C) SFOSTS shall comply with the following performance requirements and prohibitions:

- (1) An SFOSTS shall not discharge to an abandoned well, drainage well, a dry well or cesspool, a sink hole or other connection to ground water. If classified as a class V injection well, an SFOSTS shall comply with 40 C.F.R. 144 (as published in the July 1, 2005 Code of Federal Regulations) and the registration requirements pursuant to rule 3745-34-13 of the Administrative Code.
- (2) An SFOSTS shall not be permitted for the holding, treatment, or dispersal of industrial waste or storm water for industrial activities. For the purpose of this rule, the normal use of housekeeping products does not constitute industrial waste. Any waste prohibited for introduction into an SFOSTS by the Ohio environmental protection agency regulations shall be source separated and regulated by Ohio environmental protection agency.
- (3) An SFOSTS shall not be sited within the sanitary isolation radius of a public water system as determined in accordance with rule 3745-09-04 of the Administrative Code. An SFOSTS shall have additional design and/or management controls when sited within the inner management zone of a drinking water source protection area determined to be highly susceptible to contamination by the Ohio environmental protection agency source water assessment and protection program for a community or non-transient non-community public water system as defined in rule 3745-81-01 of the Administrative Code.
- (4) A board of health that has assumed authority for SFOSTS in accordance with paragraph (B) of this rule shall not permit a privy or holding tank for an SFOSTS. Except as permitted for a household sewage disposal system by a board of health, holding tanks are subject to the requirements of the Ohio environmental protection agency under rule 3745-42-11 of the Administrative Code.

(D) The flow and waste strength characteristics of an SFOSTS shall be addressed in accordance with the following provisions:

- (1) The owner or owner's agent shall provide information on the sources of sewage from the structure or structures to be served by an SFOSTS for the board of health determination of compliance with this rule. The board of health may require submission of building and plumbing plans including plumbing fixture details and other information as needed.
- (2) The daily design flow estimate for an SFOSTS shall comply with the following general provisions:

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- (a) The daily design flow for an SFOSTS shall be determined in accordance with table A-1 of rule 3745-42-05 of the Administrative Code. For an SFOSTS with periodic large daily flows that are stored to avoid exceeding the one thousand gallon per day treatment limit, the peak daily design flow shall be greater than the average of the daily flows and no actual daily flow shall exceed three thousand five hundred gallons.
 - (b) An increase in the daily design flow estimate for an SFOSTS shall be required by the board of health when there is an indication that the flows established in accordance with paragraph (D)(2)(a) of this rule will be exceeded. Any required increase in daily design flow shall be documented on the installation permit and operation permit.
 - (c) A reduction in daily design flow for an SFOSTS may be approved by the board of health when the information submitted indicates conditions that justify reduced flow such as limited fixtures, waterless toilets, or other circumstances that may warrant a reduction in daily design flow. Any approved reduction in daily design flow shall be documented on the installation permit and operation permit.
- (3) The waste strength estimate for an SFOSTS shall be determined for design purposes in accordance with the following general provisions:
- (a) When the waste strength for an SFOSTS is expected to exceed or has exceeded typical residential waste strength, the design plan shall include loading calculations using values in accordance with table A-1 of rule 3745-42-05 of the Administrative Code. Any variation from the loading table values shall be justified in the design plan including waste strength characterization information. Board of health approval for any reduction or increase in loading estimates shall be documented on the installation permit and operation permit.
 - (b) Additional pretreatment shall be provided to assure that the SFOSTS soil absorption component receives a waste strength within the range of typical residential sewage. The method of pretreatment to reduce waste strength shall be justified in the design plan, reviewed by the board of health for compliance with this regulation, and, if approved, shall be documented on the installation permit and operation permit.
 - (c) When an external grease interceptor is a component of the proposed pretreatment to reduce waste strength, the external grease interceptor shall be located, designed, and installed in a manner that will allow access for inspection and maintenance, including the following:
 - (i) a source segregated inlet line, when feasible;

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- (ii) sized to account for flow volume and temperature; and
 - (iii) watertight access risers extended to grade with secure covers.
- (E) An operation permit shall include provisions to assure the proper operation and maintenance of an SFOSTS when the board of health has expanded its local authority through the regulation of SFOSTS in accordance with this regulation.
- (F) When a board of health has taken responsibility for SFOSTS in accordance with this regulation, the board of health shall notify the Ohio environmental protection agency within sixty days when an SFOSTS that was previously permitted to be installed by the Ohio environmental protection agency has been abandoned in accordance with this chapter.