

**REGULATIONS OF THE BOARD OF
HEALTH OF THE CLERMONT
COUNTY GENERAL HEALTH
DISTRICT**

Regulation 415

**SEWAGE TREATMENT
SYSTEM RULES**

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**Clermont County General Health District
Sewage Treatment System Rules
Regulation 415**

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415-01 - Definitions

As used in 415-01 to 451-25 of Clermont County General Health District's Sewage Treatment System Rules:

- 1) "AASHTO" mean the American association of state highway and transportation officials.
- 2) "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.
- 3) "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 system. For the purposes of these rules, 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.
- 4) "ANSI" means the American national standards institute.
- 5) "ARCPACS" means the federation of certifying boards in agriculture, biology, earth and environmental sciences.
- 6) "ASTM" means the American society for testing and materials or ASTM international.
- 7) "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 these rules, a limiting condition shall include soils having bedrock, rock or other fragments greater than fifty per cent by volume.
- 8) "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.
- 9) "Board of health" means the board of health of the Clermont County General Health District or its authorized representative.
- 10) "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.
- 11) "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 treatment system, or other points of disposal.

- 12) "Curtain drain" means a subsoil surface drain that prevents the entrance of ground water into the area of the household sewage treatment system.
- 13) "Department of health" means the department of health of the state of Ohio.
- 14) "Director of health" means the director of the department of health of the state of Ohio and includes any authorized representative of the director.
- 15) "Domestic septage" means the liquid or solid material removed from a sewage treatment system, septic tank, portable toilet, or type III marine sanitation device as defined in 33 C.F.R. 159.3. (as published in the July 1, 2005 Code of Federal Regulations) "Domestic septage" does not include grease removed from a grease trap.
- 15) "Drainage system" means a drain or drains designed to effectively lower seasonally ponded or shallow subsurface water to establish or increase an unsaturated vertical separation distance uniformly beneath a soil absorption component.
- 16) "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.
- 17) "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.
- 18) "Filter" means any device or material which separates matter in suspension from a liquid.
- 19) "Gradient drain" means a drain designed to create a hydraulic gradient to facilitate the flow of subsurface water away from the area of a soil absorption component to allow effluent from a sewage treatment system to infiltrate the soil.
- 20) "Graywater" means sewage that does not include flows from toilets and urinals, and in some cases also does not include flows from kitchen sinks carrying food wastes.
- 21) "Ground water" means all water occurring in an aquifer. For the purposes of these rules, ground water includes an apparent or perched seasonal water table.
- 22) "Hardscape" means any constructed surface area on the landscape of a site such as a driveway, parking area, patio, building slab, or other similar surface area.
- 23) "Health commissioner" means the health commissioner of Clermont County General Health District or his authorized representative.

- 24) "Household sewage treatment system" means any sewage treatment or treatment system or part thereof for a single family, two family, or three family dwelling which receives sewage.
- 25) "Household sewage treatment system (HSTS)" means any sewage treatment system, or part of such a system, that receives sewage from a single-family, two-family, or three-family dwelling and residential dwellings or appurtenances including but not limited to:
- a) A bed and breakfast, residential facility, or other residence as described in divisions (B)(2), (B)(4), and (B)(13) of section 3717.42 of the Revised Code.
 - b) An ancillary restroom associated with a dwelling in a location such as a barn or personal garage that is not used as an additional dwelling, sleeping area, or business and the users of the ancillary restroom are the same users as the dwelling. An ancillary restroom shall not be available for public use.
 - c) Vacation rental cabins provided there is a separate HSTS for each cabin.
 - d) A dwelling with a home business having no access for the general public and does not generate additional sewage as part of its operation.
- 26) "IAPMO" means the international association of plumbing and mechanical officials.
- 27) "Infiltrative surface" means the contact area where sewage is applied to the soil or sand fill for the purpose of treatment and/or dispersal.
- 28) "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.
- 29) "Inspection" means the on-site evaluation or analysis of the functioning of a sewage treatment system.
- 30) "Installer" means any person who engages in the business of installing or altering or who, as an employee of another, installs or alters any sewage treatment system.
- 31) "Interceptor drain" means a drain designed to intercept the horizontal flow of subsurface water to reduce its impact on a down gradient soil absorption component.
- 32) Layout plan means a plan that is submitted by an installer in lieu of a new system design created by a onsite system designer. A layout plan utilizes designs and components that have been previously approved by the Health District that meets current regulations. If an installer submits a previously approved system that was

developed by an outside designer, then the installer must include written approval from the designer to use that system in a Layout Plan.

- 33) "Limiting condition" means an impermeable soil layer or fragipan, rock strata, normal 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.
- 34) "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.
- 35) "Leaching system" means that part of a household sewage treatment system used to dissipate the effluent from a sewage tank by means of evaporation, transpiration, soil absorption, soil percolation. Or any combination thereof.
- 36) "Leaching pit" means any covered pit with lining designed to permit effluent from a sewage tank to seep into the surrounding soil.
- 37) "Lot" means the land area used or intended to be used as a single family, two family, or three family dwelling site or a legally recorded parcel of land.
- 38) "Manufacturer" means any person that manufactures a sewage treatment system or components of a sewage treatment system.
- 39) "Monitoring" means the activity of verifying performance requirements and may include, but is not limited to, sampling of effluent from a sewage treatment system component. For the purpose of these rules, monitoring activities shall be conducted by either the board of health or a registered service provider.
- 40) "NPDES" means national pollutant discharge elimination system.
- 41) "NRCS" means the natural resources conservation service.
- 42) "NSF" means the national sanitation foundation or NSF international.
- 43) "ODNR" means the Ohio department of natural resources.
- 44) "OEPA" means the Ohio environmental protection agency.
- 45) "O&M" means operation and maintenance.
- 46) "Order one soil survey" means a soil inventory produced for very intensive land use that requires detailed information about soils. Standards are described in section 655.04 of the national soil survey handbook. Order two soil survey information is available in county soil surveys.
- 47) "Normal ground water table" means the shallowest depth of soil which is saturated with water for an extended or permanent time period.

- 48) "Nuisance" means any condition of sewage that is potentially injurious to the health, safety, comfort, or property of a person, or pollutes waters of the state.
- 49) "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.
- 50) "Perennial stream" means natural waters of the state with a defined stream bed and bank and constant source of flowing water.
- 51) "Person" has the same meaning as in section 1.59 of the Revised Code and also includes any state, any political subdivision of a state, and any department, division, board, commission, agency, or instrumentality of a state or political subdivision.
- 52) "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.
- 53) "Public health nuisance" means the same as "Nuisance"
- 54) "Point of discharge" means the point at which the effluent from a household sewage treatment system or curtain drain enters a public ditch or discharges to the surface of the ground or to a body of water.
- 55) "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.
- 56) "Privy" means any sanitary, waterless device for the collection and storage of human excreta but does not include chemical commodes or other portable receptacles.
- 57) "Replacement system" means the installation of a new sewage treatment system to replace an existing system.
- 58) "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.
- 59) "Sanitary sewerage system" means any public or community sewerage collection system conveying sewage to a central sewage treatment plant and includes pipelines or conduits, pumping stations, force mains, and all other constructions, devices, appurtenances, and facilities that convey sewage to the central sewage treatment plant and that are required to obtain a permit under Section 6111. of the Revised Code.

- 60) "Seasonally high water table" means the shallowest depth of soil which is saturated with water during a season, a temporary period of time, or as a temporary condition.
- 61) "Secured cover" means a removable cover or manhole that prohibits unwarranted or unauthorized removal.
- 62) "Sewage tank cleaner" means any person who engages in the collection, transportation, and disposal of the contents of sewage tanks, or privies.
- 63) "Septage hauler" means the same as "Sewage tank cleaner"
- 64) "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.
- 65) "Service provider" means any person who services, but does not install or alter, a sewage treatment system.
- 66) "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.
- 67) "Sewage tank" means any watertight tank designed to retain sewage and includes, but is not limited to, septic tanks and aerobic type treatment tanks.
- 68) "Sewage treatment system (STS)" means an HSTS, a small flow on-site sewage treatment system, or both, as applicable.
- 69) "Small flow on-site sewage treatment system (SFOSTS)" means a system, other than an HSTS, that is designed to treat 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:
- a) Vacation rental cabins with multiple cabins served by an SFOSTS.
 - b) 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.
 - c) Two dwellings, including arrangements such as a dwelling and a detached garage with living space.
 - d) 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 rule.

- 70) "Sewage Nuisance Abatement and Remediation Plan" (SNARP) is a plan where predefined steps are followed to allow significant repairs to be made to a failing HSTS culminating in the system being completely replaced if the plan is followed to the end. If at any point during this process the HSTS becomes functional, no further action will be required unless failure conditions return.
- e) "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.
 - f) "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 soil infiltration loading rate. The "soil loading rate" determines the area required for absorption. The "soil loading rate" and the LLR determine the width and length of the soil absorption area.
 - g) "Subdivision" means that which is defined by section 711.001 of the Ohio Revised Code.
 - h) "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.
 - i) "UIC" means underground injection control and relates to the OEPA underground injection control program authorized by sections 6111.043 and 6111.44 of the Revised Code.
 - j) "UL" means underwriters laboratories incorporated.
 - k) "USDA" means the United States department of agriculture.
 - l) "USEPA" means the United States environmental protection agency.
 - m) "Vertical separation distance" means the depth from the infiltrative surface of the distribution system of the soil absorption component to a limiting condition.
 - n) "Waters of the state" means that which is defined in division (H) of section 6111.01 of the Revised Code as all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and other bodies or accumulations of water, surface and underground, natural or artificial, regardless of the depth of the strata in which underground water is located, that are situated wholly or partly within, or border upon, this state, or are within its jurisdiction, except those private waters that do not combine or effect a junction with natural surface or underground waters.

- A) The purpose of these STS rules is to establish HSTS and SFOSTS rules of general application including standards for siting, design, installation, alteration, operation, monitoring, maintenance, and abandonment of a STS to protect public health and the environment. The STS rules apply to HSTS in accordance with paragraphs (B) and (C) of rule 415-03 of these rules.
- B) The scope of these rules includes the performance of STS components, persons, agencies, and organizations as these relate to the effective management of STS and SFOSTS in Clermont County, including the siting, design, installation, alteration, operation, monitoring, maintenance, and abandonment of a STS.

415-03 Authority, applicability, and related provisions

- A) Unless otherwise specified, the rules apply to both HSTS and SFOSTS, referred to jointly as STS. When the rules specifically address SFOSTS, the provisions only apply to those SFOSTS that are under the jurisdiction of Clermont County General Health District per ORC 3718.021.
- B) These rules have been developed under OAC 3701-29-20 (D) and shall apply to all STS permitted to be installed or altered pursuant to these rules after the effective date of this section. In cases where the board of health has provided written approval for a household sewage treatment system prior to July 1, 2007, the board of health shall permit the installation of the household sewage treatment system under the following conditions:
 - 1) There is written documentation of the household sewage treatment system approval and the written approval is not more than 5 years old.
 - 2) The household sewage treatment 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 treatment system.
 - 4) Other than the siting and household sewage treatment system specifications previously approved, the provisions of these rules shall apply.
- C) All STS installed or altered, or permitted to be installed or altered, prior to the effective date of these rules shall comply with the rules in effect at the time of installation, alteration, or permit issuance, unless otherwise required by these rules. A STS that has been installed or altered prior to the effective date of these rules and that is operating or has the capacity to be operable on the effective date of these rules is deemed approved for the purposes of these rules unless declared to be a public health nuisance.
- D) Unless otherwise specified in these rules, the persons responsible for compliance with the rules, including but not limited to the siting, design, installation, alteration, operation, monitoring, maintenance, and abandonment of a STS,

shall be the property owner and any person performing a related service or activity. Enforcement action may be taken against the property owner and/or any person who performs a related service or activity.

415-04 Responsibility for compliance, demonstration of competency, and registration requirements

- A) The property owner is responsible for the proper siting, design, installation, alteration, operation, monitoring, maintenance, and abandonment of a STS. The owner shall comply with all applicable provisions of the law and rules and shall operate the STS in compliance with O&M instructions and any conditions of an operation permit issued by the board of health.
- B) A site and soil evaluator shall comply with the requirements of rule 415-09 of these rules. A site and soil evaluator shall be capable of properly conducting site and soil investigations and accurately recording required information. Demonstration of competency may include, but is not limited to, certification as a professional soil scientist by the association of Ohio pedologists or ARCPACS.
- C) A designer shall comply with the requirements of these rules and all other applicable laws and rules when submitting design plans for a STS, including details on system components, construction, and O&M sufficient for regulatory review and determination of compliance. Design plans shall be completed in accordance with rule 415-07 of these rules.
 - 1) Estimate and report any expected variations in STS daily design flows and SFOSTS pollutant concentrations and mass loads exceeding residential waste strength.
 - 2) Select approved and appropriate system components capable of meeting performance requirements based on site and soil evaluation information.
 - 3) Prepare scaled design plan, profile, and detail drawings depicting STS layout, dimensions, and materials and equipment specifications including construction, and O&M information.
 - 4) Conduct installation oversight as necessary.
- D) An installer, septage hauler, or service provider shall comply with the general conditions for registration required in this paragraph and the specific provisions and competency requirements in rules 415-04.1, rule 415-04.2, and rule 415-04.3 of these rules.
 - 1) An application for registration shall be submitted to the board of health and shall include all information required by the board of health, the registration fee, and proof of a Clermont County surety bond as required under paragraph (D)(3) of this rule.
 - a) A registrant that is a partnership, corporation, or other business association, shall designate one partner, officer, or other responsible full-time employee who shall be the company's representative registrant.

- b) Registration is not required of any person who performs labor or services under the direct supervision of a registrant. For the purposes of this rule "direct supervision" means that a registrant instructs and controls the person claimed to be supervised and that the registrant is responsible for the actions of that person and is reasonably available if and when needed, even though such registrant may not be physically present at the site.
- 2) An installer, septage hauler, or service provider shall comply with all requirements established in this rule. If a registration is revoked or suspended in accordance with paragraph (D)(6) of this rule, the registrant designated under paragraph (D)(1)(a) of this rule shall be required to again comply with registration requirements before a registration is reinstated or a new registration is issued by the board of health.
 - 3) No person shall undertake the installation and repair of any onsite sewage treatment system or the hauling of septage without first providing a bond which requires the individual or firm to faithfully and fully perform all work in accordance with all permits issued by the Clermont County General Health District and conforms to any and all rules and regulations and orders of the Clermont County General Health District, and all applicable codes of the State of Ohio and Clermont County. An installer and septage hauler shall obtain a surety bond which provides coverage for all work performed on a STS in Clermont County, on an original bond agreement form provided by the board of health.
 - a) The surety bond required for registration shall establish a contractual relationship between the principal, and the surety, and shall be executed by the applicant as principal and a surety company authorized to do business in the state as surety.
 - b) The surety bond shall be for the benefit of any aggrieved party for damages incurred as a result of a violation of these rules. For purposes of this rule aggrieved party means the local board of health where work was performed, property owner or the agent of the property owner who contracts with an installer, service provider or septage hauler and whose STS is not installed, altered, serviced, maintained or abandoned in compliance with the provisions of these rules.
 - c) The surety bond shall be issued to provide insurance coverage for the calendar year of the registration application for any work performed in Clermont County. The surety bond shall provide that the aggregate liability of the surety for any and all breaches of the conditions of the bond shall in no event exceed the penal sum of the bond for each calendar year for which the bond is issued.
 - d) If the surety bond for the registration is canceled, the registrant shall immediately submit to the board of health proof of a new surety bond in accordance with the requirements of this rule. The surety company shall give thirty days written notice to the board of health prior to the effective date of cancellation.

- e) An installer shall maintain a surety bond of not less than fifteen thousand dollars(\$15,000). A septage hauler shall maintain a surety bond of not less than five thousand dollars (\$5,000). All bonds shall be valid until cancelled or replaced.
 - f) Any person who alleges to be an aggrieved party shall give written notification to the surety, the board of health, and the installer or septage hauler as applicable within one year of the date of completion of the work on the STS. The board of health may conduct an investigation as necessary to determine if a violation of these rules has occurred.
- 4) A registration shall not be transferable and shall be expire annually on the thirty-first of December. The homeowner shall not be required to have a registration for the installation of a new STS or for performing repairs on the existing STS for the dwelling which he occupies.
 - 5) A registrant shall maintain and submit to the board of health such complete and accurate records and information that may be required for determining compliance with the rules.
 - 6) A registrant shall submit and be subject to the compliance and enforcement provisions established in rule 415-18 of these rules. When the board of health finds that a registrant is or has engaged in practices in violation of these rules, the board of health shall provide the registrant with written notification of the alleged violation, indicate if the registration may be revoked or suspended, and afford an opportunity for a hearing if the registrant does not agree to voluntary compliance. The board of health may revoke or suspend a registration when a registrant fails to timely correct violations in compliance with these rules.

415-04.1 Installers

- A) In addition to compliance with the general registration requirements in paragraph (D) of rule 415-04 of these rules a registered installer shall provide proof of compliance with any training, qualification, or certification conditions required for a component or system and shall comply with any installation instructions in accordance with an installation permit issued by the board of health.
- B) As a condition of an installation permit, a registered installer shall warrant that the STS has been installed in accordance with all applicable rules and design specifications. A registered installer shall prepare and submit an as-built record for each completed installation in accordance with paragraph (C) of rule 415-07 of these rules.
- C) Any person with an open expired installation permit is not eligible to obtain another permit until the open permit is resolved. Exceptions to this rule will only be made on a case by case basis by the Health Commissioner.

415-04.2 Septage haulers

- A) In addition to compliance with the general registration requirements in paragraph (D) of rule 415-04 of these rules, a septage hauler shall;
 - 1) Obtain a permit from the board of health for each vehicle used to haul septage, report tank capacity for each vehicle, allow each vehicle and its equipment to be inspected by the board of health, and maintain vehicles in compliance with paragraph (B) of this rule.
 - 2) Manage the pumping, hauling, and disposal of septage in compliance with all applicable rules and regulations.
- B) Any vehicle and equipment used for septage hauling shall comply with the following:
 - 1) The company name and phone number is legibly written on the vehicle in words and numbers no less than four inches in height.
 - 2) All septage hauling equipment is maintained in proper operating condition and managed in a manner that prevents leakage or spills while in operation, transit, or storage.

415-04.3 Service providers

- A) In addition to compliance with the general registration requirements in paragraph (D) of rule 415-04 of these rules, and as a specific condition of registration, a service provider shall demonstrate competency through one of the following mechanisms:
 - 1) A registered service provider shall provide proof of compliance with any training, qualification or certification conditions required by the manufacturer or distributor of a component or system and shall comply with O&M requirements in accordance with an installation permit or operation permit issued by the board of health. In addition to any such conditions or requirements, a service provider shall:
 - 2) Provide manufacturer and/or general O&M information to the owner of the STS as applicable, and to the board of health if required, either in writing or through reference to available resources.
 - 3) Conduct routine O&M services on schedule and according to manufacturers requirements.
 - 4) Provide to the owner a report of the services conducted including the date of service and notation of any evidence of clear water infiltration, STS component deterioration, or other problem conditions.
- B) A registered service provider shall comply with any reporting or records retention requirements established by these rules.

- 1) Receive routine training from the manufacturer/distributor for all types of pre treatment devices that the registrant intends to operate and maintain. Proof of training will be required and kept in the registrant's file.
- 2) Registrant shall attend training from the Health District or other source approved by the Health Commissioner for non-proprietary mound system components. Proof of this training will be required and kept in the registrant's file.
- 3) Each Service Provider agrees to provide at least an annual service contract for each STS they operate and maintain. Each STS under contract with the provider must be inspected a minimum of two (2) times per calendar year and a copy of the inspection report faxed or mailed to the board of health to be kept in the permanent file for that system. Failure to do this may result in an inspection by Health District staff and a re-inspection fee charged to the service provider.
- 4) A STS that is equipped with telemetry is required to be inspected once annually. The Health District must have access to all information gathered through the telemetry service and receive a copy of each annual inspection report.
- 5) Service providers must submit a list of systems under contract each year at the time of registration including the established fees for each system. New systems placed under contract between registrations will be paid for at the following registration. Failure to do so could result in revocation of a registration.

415-05 STS Fees and fee categories

A) Fees established by a Board of Health are as follows:

STS Basic Installer Registration	\$50.00
STS Advanced Technology Installer Registration	50.00
Scavenger Truck Registration (Septage and Garbage)	50.00
STS Service Provider Registration	100.00
STS Application (room addition, detached garage, pool)	105.00
STS Application (new construction or repair)	400.00
STS Installation Permit	325.00
STS Alteration Permit	105.00
STS Reinspection	65.00
STS Loan Inspection <u>or</u> Water Loan Inspection	95.00
STS Loan Inspection <u>combined with</u> Water Loan Inspection	155.00
STS <u>or</u> Water Loan Re-Inspection	60.00
STS Loan Re-Inspection <u>combined with</u> Water Loan Re-Inspection	85.00
STS Basic System Assessment	30.00
STS Interim System Assessment	30.00
STS Service Provider Basic System Assessment	15.00
STS Basic System Assessment Reinspection	45.00
Subdivision Review (first lot)	200.00
Subdivision Review (each additional lot)	125.00

Existing Lot Review	125.00
Variance (Isolation Distance, etc.)	50.00
Variance (Black Water Holding Tank)	200.00
Semi Public Assessment (with no discharge)	75.00
Semi Public Assessment (discharge < 1500 GPD)	75.00
Semi Public Assessment (discharge 1500-4999 GPD)	100.00
Semi Public Assessment (discharge 5000-9999 GPD)	200.00
Semi Public Assessment (discharge 10,000-25,000 GPD)	300.00
Semi Public Reinspection	45.00
Commercial System Design Review and Installation Inspections	450.00
STS or Water Field Trip	35.00
STS Re-Design fee	150.00
Nuisance Re-Inspection	40.00
Onsite System Management District Application	100.00

B) Any work requiring a permit that is started with out the permit being obtained first may be assessed 2.5 times the normal permit fee at the discretion of the Health Commissioner.

415-06 Sewage treatment requirements

- A) The design, construction, installation, location, maintenance, and operation of household sewage treatment systems including, but not limited to, septic tanks, aerobic type treatment systems, filters, leaching fields, leaching trenches, building sewers, and privies or parts thereof shall comply with these rules 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 treatment system, prior to its being occupied.
- C) Each household sewage treatment 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. An SFOSTS may serve multiple dwellings or structures. In the case where two or more dwellings or structures are served by an SFOSTS, the entire SFOSTS shall be owned and operated by one person.
- D) No household sewage treatment system or part thereof shall create a 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 treatment 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 NPDES effluent standards established by the director of the Ohio environmental protection agency.
 - 4) When test results indicate that the standards set forth in rule 415-06(G)(3) are not being met or 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.
- H) Lots on which household sewage treatment 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 Ohio Administrative Code and these rules.
- I) A suitable area shall be available to provide for the complete relocation and replacement of the household sewage treatment system as required by rules 3701-29-01 to 3701-29-21 of the Ohio Administrative Code and these rules.
- 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 treatment 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 Ohio Administrative Code and these rules.
- K) A household sewage treatment system shall be a minimum of ten feet from any utility service line, driveway or other hardscapes such as pools or patios, property line or right-of-way boundary, any building or other structure, and fifty feet from any water supply source, surface water impoundment, lake, river, or perennial stream on this or any adjacent lot.
- L) No household sewage treatment system shall be installed, maintained, or operated on property accessible to a sanitary sewerage system.
- M) Whenever a sanitary sewerage system becomes accessible to the property, a household sewage treatment 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 treatment 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, pet wastes or any other wastes known to adversely affect the household sewage treatment system shall not be deposited or flushed in plumbing fixtures nor shall they otherwise be introduced into a building sewer or household sewage treatment system.
- P) A STS shall comply with the following performance requirements and prohibitions:
- 1) A STS shall comply with the conditions specified in an installation and/or operation permit issued by the board of health.
 - 2) No STS shall 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.
- Q) A STS shall utilize soil absorption as the means for final treatment and/or dispersal, except for the HSTS conditions and limitations described in paragraph (R)(2) of this rule.
- 1) A STS shall not be permitted for use in any new lot or new subdivision created after 01-01-2007 when soil absorption is not feasible.
 - 2) When soil absorption is determined to be infeasible for a replacement HSTS for an existing dwelling or a new HSTS for an existing lot, a discharging HSTS shall only be permitted in compliance with NPDES requirements.
- R) STS shall be sited in compliance with these rules including the following:
- 1) Sufficient suitable area shall be available to accommodate a STS including a designated area for complete relocation and replacement of a STS, the minimum horizontal isolation distances as required in paragraph (K) of this rule, and any additional horizontal isolation distance determined necessary to accommodate lateral flow due to shallow limiting conditions identified in the soil and site evaluation conducted in accordance with rule 415-09 of these rules.
 - 2) A permanent legal easement shall be required for any portion of a STS not sited on the same parcel as the structures or dwelling served by the STS. When an easement is required under this paragraph, a STS installation permit shall not be issued by the board of health until a certified copy of the legally recorded easement is provided.
- S) A STS shall not be sited under soil and site conditions that prohibit compliance with these rules. The following are examples of conditions that may be prohibitive or may require additional siting, design or management conditions:

- 1) Exposed bedrock, boulders, stones, gravel, and coarse sand at or above the surface of the ground or underlain within a foot of the ground surface.
 - 2) Slopes in excess of the limits of the design, installation, maintenance or operation of the proposed STS or when there is risk of slippage, slump, or land slide.
 - 3) Filled, reclaimed, or disturbed areas where soil and site conditions may not be adequate to provide treatment and/or dispersal.
- T) Due to the nature of repair situations a Sewage Nuisance Abatement and Remediation Plan may be exempt from Section 415 as long as it meets the following:
- 1) It eliminates a Public Health Nuisance; and
 - 2) It takes the economic impact of a full replacement into consideration; and
 - 3) All sewage nuisance abatement and remediation plan interim phases shall lead to a final system that is in compliance with OAC 3701-29 and these regulations.

415-07 Layout plans, design plans and as-built records

- A) For all new home constructions either a layout plan or a design plan shall be required from a source outside of the health district. Changes to either of these plans must be signed off on by the designer, installer and Health District representative. Approval from the homeowner may also be required.
- B)“A registered installer may submit a Layout Plan for the installation of a STS. A layout plan shall utilize components approved by the director of health and/or the board of health. Those components shall be placed on the landscape according to the results of the site and soil survey. A layout plan shall include:
- 1) A site plan drawn to scale on eight and a half inch by eleven inch or larger paper showing HSTS layout elevations corresponding to flagged or staked locations at the site. The designated HSTS area shall be protected from disturbance. The site plan shall also verify horizontal isolation distances and include the designated area for complete relocation and replacement of the STS.
 - 2) Written details on the daily design flow, selected loading rates based on the site and soil evaluation, system configuration with absorption area dimensions, and, if applicable, pump selection information and pressure distribution network description and calculations.
 - 3) Product information and written description of materials and system components including size of all tanks and distribution component materials including mechanical distribution and diversion mechanisms.

- 4) Manufacturer O&M requirements or instructions for components not addressed in general O&M information available through the board of health or the department of health.
 - 5) Any additional information requested by the board of health related to components, materials, and installation or O&M specifications.
- C) A design plan in compliance with this paragraph shall be required unless a layout plan is provided by a registered installer in compliance with paragraph (B) of this rule. A design plan shall be legible, readable, and of sufficient detail to demonstrate compliance with the provisions of these rules. A design plan shall include:
- 1) Documentation of the rationale for design decisions used to address site and soil limitations including justification for selected loading rates and the use of any soil depth credits. The site and soil evaluation shall be available with the design plan.
 - 2) Description of the dwelling and/or structures to be served by the STS with a designated daily design flow including any anticipated variations. The STS shall be designed to handle peak daily design flows or the design shall include flow equalization with designated reserve and surge capacity and timed dosing in compliance with rule 415-11 of these rules.
 - 3) Description of the treatment processes used to meet performance requirements including information necessary to confirm compliance with any applicable NPDES effluent quality standards or applicable standards established in rule 415-12 of these rules. In addition, if applicable, documentation of pollutant concentrations and mass loading in excess of residential waste strength, including the design for treatment to reduce higher strength wastewater to typical residential waste strength prior to distribution to a soil absorption component.
 - 4) Plan notes designating that the STS area shall be protected from disturbance, and additional plan notes as needed to explain any siting, installation, or O&M requirements or restrictions, including any preconstruction meetings at the site, conditions on the selection of an installer, STS start-up procedures or other designer-designated conditions.
 - 5) A site plan, drawn to a scale of one inch equals fifty feet or less, sufficient to demonstrate compliance with these rules and including but not limited to:
 - a) North directional arrow.
 - b) Identified vertical and horizontal reference point or benchmark with its location clearly marked at the site.
 - c) Designation of the described soil boring and/or excavation locations from the soil and site evaluation.
 - d) Outline of existing and proposed structures, driveways and other hardscapes, and other related items on the property.

- e) Location of STS components and a replacement area.
 - f) The dimensions of the property with horizontal isolation distances to the STS and replacement area from the items designated in paragraph (E) of rule 415-07 of these rules, including but not limited to private water systems and surface water features.
 - g) Topography for the areas of the dwelling and/or structures to be served and the proposed STS and designated replacement areas including an indication of drainage features in these and surrounding areas.
 - h) Designation of any easements, disturbed areas, or wooded areas within fifty feet of the proposed STS and replacement area, or other site characteristics or obstructions that may affect the installation or operation of the STS.
 - i) Means of access for O&M equipment to service the STS.
- 6) Enlarged plan view drawings of the STS components if the site plan scale does not allow for sufficient detail.
 - 7) Profile drawing showing elevations relative to surface grade sufficient to demonstrate compliance with these rules including the invert, or other elevations necessary to assess the hydraulic profile of STS components and any gravity or pumped discharge outlet elevations.
 - 8) Plan and section views for the STS components and/or attachments of component and material specification information.
 - 9) Installation and O&M instructions or a reference to materials where this information is available.
 - 10) Plan note requiring that the STS installer obtain designer approval prior to any intended changes to the plan and those changes be approved by the Health District prior to implementation.
 - 11) An SFOSTS design must be approved and stamped by a Professional Engineer.
- D) An as-built record shall be required to be completed by the registered installer for a completed STS installation or alteration as a condition of the installation or alteration permit and as a condition of registration in accordance with rule 415-04.1 of these rules. The as-built record does not substitute for a layout plan or design plan required in accordance with this rule. An as-built record shall include:
- 1) A legible record on eight and a half inch by eleven inch or larger pages with copies provided to the owner and the board of health for inclusion in the permanent system file. Use of layout plan or design plan documents or as-built template forms may be acceptable.
 - 2) Any changes to the approved design plan or layout plan including distances from installed STS components to any items having applicable horizontal

isolation distances. A change in location of a STS from that designated on a layout or design plan shall not be made without prior approval by the board of health and shall not violate horizontal isolation distances required by these rules.

- 3) A designated vertical and horizontal reference point or benchmark with its location marked at the site.
- 4) Plan view drawing with elevations for installed STS components per the design plan or layout plan.
- 5) Profile drawings with pipe and component elevations to confirm depths for hydraulic flow, freeze protection, and other related installation functions.
- 6) Any additional information for components and materials may be required by the board of health including but not limited to manufacturer or supplier provision of component installation or O&M instructions and verification of compliance with any start-up procedures or aggregate specifications.
- 7) The as-built record shall include a statement by the registered installer indicating that the STS was installed in accordance with all applicable rules and plan specifications.

415-08 Sewage source, building sewer, and related fixtures

- A) The owner or owner's agent shall provide information on the sources of sewage from the dwelling or structures to be served by a STS to determine compliance with this rule. Submission of building and plumbing plans including plumbing fixture details and other information may be required as needed.
- B) The daily design flow estimate for a STS shall comply with the following general provisions unless otherwise specified in these rules:
 - 1) Except as provided in paragraphs (B)(3) and (B)(4) of this rule, the daily design flow for a HSTS shall be a peak flow of one hundred twenty gallons per day per bedroom.
 - 2) The daily design flow for an SFOSTS shall be determined in accordance with the design flow table established by OEPA. 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 by a factor of 1.66 and no actual daily flow shall exceed three thousand five hundred gallons.
 - 3) An increase in the daily design flow estimate for a STS shall be required by the board of health when there is an indication that the flows established in accordance with paragraph (B)(1) or (B)(2) of this rule will be exceeded. Any required increase in daily design flow shall be documented on the installation permit and operation permit.
 - 4) A reduction in daily design flow may be approved by the board of health when the information submitted indicates conditions that justify reduced

flow such as limited fixtures, waterless toilets, in-house graywater recycling, or other circumstances that may warrant a reduction in daily design flow. Justification for a proposed reduction in daily design flow shall be included in the site review application and, if approved, shall be documented on the installation permit and operation permit.

- C) The waste strength estimate for a STS shall be determined for design purposes in accordance with the following general provisions unless otherwise specified in these rules:
- 1) Sewage generated by a dwelling served by a STS shall be judged to be typical residential sewage following primary treatment when the total suspended solids (TSS) content is not expected to exceed one hundred and fifty milligrams per liter (150mg/L), the five-day biochemical oxygen demand (BOD₅) is not expected to exceed two hundred and fifty milligrams per liter (250mg/L), or the contents of fats, oils, and greases (FOG) is not expected to exceed fifteen milligrams per liter (15mg/L). Consideration shall be given to eliminating the use of garbage disposals in kitchen sinks to assist in maintaining residential waste strength below these maximum levels and to reduce residuals and the frequency of septage removal.
 - 2) Any waste prohibited by underground injection control (UIC) regulations for introduction into an SFOSTS shall be source separated and regulated by OEPA.
 - 3) When the waste strength for a STS is expected to exceed or has exceeded the typical residential waste strength described in paragraph (C)(1) of this rule:
 - a) The design plan shall include loading calculations using values in accordance with the loading table established by OEPA. Any variation from the loading table values shall be justified in the design plan including waste strength characterization information. Any reduction or increase in loading estimates shall be approved and documented on the installation permit and operation permit.
 - b) Additional pretreatment shall be provided to assure that the STS 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 for compliance with these rules, 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;
 - ii) Sized to account for flow volume and temperature; and
 - iii) Watertight access risers extended to grade with secure covers.

- D) Building sewers shall carry all sewage flow from the dwelling or structure, including graywater or other segregated sewage, and shall be connected to a STS in compliance with these rules.

415-09 Site and soil evaluation

- A) A site review shall be conducted for any proposed STS installation to review the completeness of the site and soil evaluation information required in this rule. Any person conducting a site and soil evaluation shall assess and record information in accordance with this rule. Board of health staff shall utilize the site and soil evaluation information to determine the feasibility of siting a STS in compliance with these rules.
- B) The site and soil evaluation shall include the assessment and documentation of the following:
 - 1) Designation of the described soil boring and/or excavation locations and the information required in paragraphs (B)(3) and (B)(4) of this rule on the site plan required in rule 415-07 of these rules or on a preliminary site drawing adequate to provide the required site and soil evaluation documentation. A scaled site drawing at one inch equals fifty feet or less shall include:
 - a) The dimensions of the lot or the proposed lot;
 - b) Any existing dwellings and/or structures and any proposed dwellings and/or structures if known;
 - c) Any site disturbances, existing driveways and other hardscapes, and proposed hardscapes or related site disturbances if known;
 - d) Location of all private water systems and surface water features on the lot and within fifty feet of the lot boundary, or within fifty feet of the locations specified in paragraph (B)(3) of this rule; and
 - e) North orientation arrow.
 - 2) Record of site and soil characteristics for each soil boring and/or excavation location designated in paragraph (B)(1) of this rule using USDA NRCS nomenclature on the form prescribed by the board of health, including but not limited to:
 - a) Site descriptions: landscape position, slope, vegetation, drainage features, rock outcrops, erosion and other natural features;
 - b) Detailed soil profile descriptions: color, texture, structure, consistence, and the depth of each soil horizon or layer and characterization of all limiting conditions; and
 - c) Documentation of any relevant surface hydrology, geologic and hydro geologic risk factors for the specific site or in the surrounding area that

may indicate vulnerability for surface water and ground water contamination.

- 3) Drawings and dimensions on the site plan or site drawing of at least two locations on the site that have been evaluated and determined to have the capacity for the treatment and/or dispersal of sewage from the proposed dwelling or structures including adequate length parallel to the land contour to accommodate the soil and linear loading rates for the conditions recorded.
- 4) Identification on the site plan or site drawing of the area for which each soil profile description is representative and designation of any areas with conditions that would prohibit or impact the siting of a STS in accordance with these rules.

415-10 Permits for Installation, alteration, remediation and operation

- A) No person shall install or replace a STS without an approved and valid installation permit. No person shall alter a STS without an approved and valid alteration permit. The installation, replacement, or alteration of a STS shall only be conducted by an installer registered in compliance with rule 415-04.1 of these rules except in the case of a homeowner who may install, replace, or alter a HSTS for a single family dwelling that will serve or serves as the homeowner's primary permanent residence.
- B) No person shall maintain or operate a household sewage treatment system without an operation permit obtained from the board of health. An operation permit shall be in effect upon board of health approval of an installation, a replacement, an alteration or passing basic system assessment of an existing STS. The responsible party, whether it is the STS owner, a responsible management entity recognized by the board of health, or both, shall be subject to the terms and conditions of an operation permit.
 - 1) Terms and conditions of the operation permit shall be specified governing the operation, monitoring, maintenance, and abandonment of the STS.
 - 2) An operation permit may be renewed, suspended, or revoked subject to the requirements of these rules, the terms and conditions of the permit, and the O&M management provisions established in accordance with rule 415-19 of these rules. An operation permit is subject to suspension or revocation conditional upon the responsible party's or parties' compliance with these rules and the terms and conditions of the permit.
 - 3) An operation permit shall require a service contract for a STS under the following conditions or as otherwise required by the board of health:
 - a) Any HSTS subject to a NPDES permit.

- b) Any STS with a pretreatment component subject to paragraph (G) of rule 415-12 of these rules.
- 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. A site review application is required for any proposed installation of a new or replacement STS and expires one year from the date of application. No person intending to install a new STS or replace an existing STS shall be issued an installation permit without an approved site review application.
 - 1) A site review application shall include the application fee and all information required including the following as applicable:
 - a) The completed site and soil evaluation as required in rule 415-09 of these rules and the design plan or layout plan required in rule 415-07 of these rules for the installation of a STS for new construction, or
 - b) Information indicating absence of one foot of suitable in situ soil.
 - c) For purposes of siting a replacement STS, a completed site and soil evaluation as described in rule 415-09 of these rules may be required.
 - 2) A site review application for a STS alteration may be required and when required, shall contain all pertinent information as well as the required application fee. In the case where a remediation involves the expansion of a soil absorption component, a site and soil evaluation may be required in compliance with rule 415-09 of these rules.
 - 3) Board of health staff shall review the application information to determine whether the proposed design plan, layout plan, or STS alteration is applicable and complies with these rules. When a proposed STS is subject to a NPDES permit, compliance with NPDES requirements shall be assured prior to issuing a permit in accordance with paragraph (B) of this rule.
- D) The board of health shall issue a permit when the pertinent information indicates that the provisions of rules 415-01 to 415-25 of the CCGHD Sewage rules can be met. The board of health may specify terms consistent with rules 415-01 to 415-25 of the CCGHD Sewage rules on the permit governing the installation, alteration, and operation of the household sewage treatment 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 415-01 to 415-25 of the CCGHD Sewage rules cannot be met.
- F) An installation permit shall remain in force until completion of the household sewage treatment 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 treatment system or any

part thereof shall conform with the requirements of rules 415-01 to 415-25 of the CCGHD Sewage rules and the terms of the permit as required by the board of health in division (D) of this rule

415-11 Septic tanks, pumps, 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 415-08 (B)(1).

B) In systems using two tanks, the septic tanks shall be connected in series and all sewage shall initially enter the first tank. In two compartment tanks, the first compartment shall not be less than one half or more than two-thirds of the total capacity of the septic tank and the transfer port in the center wall shall ensure transfer of liquid from the clear zone only.

Tanks subject to these rules shall be manufactured to be watertight and structurally sound, including septic tanks, other treatment component tanks, dosing tanks, pump vaults, HSTS holding tanks and privy vaults, or other applicable STS components.

- 1) The board of health may require watertight testing of any STS component and may accept certifications granted by the Ohio Department of Health.
- 2) Tank connections shall comply with the following specifications:
 - a) Joint connections shall be watertight.
 - b) Inlet and outlet pipe connections to a tank shall be watertight.
 - c) Watertight tests shall be conducted on all dosed systems.
- 3) Manufacturer verification that any STS component is structurally sound may be requested. The structural integrity of a STS component may be demonstrated through the manufacturer's provision of component design information verifying structural capacity for expected loads and conditions as certified by a professional engineer or through structural tests conducted in accordance with recognized standards for the component or component materials.

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.
 - 1) The septic tank shall be installed with a minimum of two watertight risers extended 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.
 - 2) All tanks shall be installed, bedded, and backfilled to the top edge of the tank with a granular material, to assure the structural integrity of the tank and minimize settling or to manufacturer specifications if they are more restrictive. 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. Concrete tanks shall be bedded, installed, and back-filled with self-compacting granular material, filling the space in the excavation up to the level of the pipe penetrations, to support the tank walls and support the inlet and outlet pipes. Fiberglass and plastic tanks shall be bedded, installed, and back-filled according to the manufacturers' specifications.
- D) Dosing tanks shall be easily accessible and have secured covers. All connections shall comply with applicable specifications under paragraphs (B)(2)(a) and (B)(2)(b) of this rule.
- E) Pumps shall meet or exceed system requirements for flow rate and operating head.
- F) Switches, controls, alarms, and electrical components are required to meet the national electric code and system design requirements.
- G) The designer and/or installer shall assure that all electrical wiring meets the national electric code.

- H) STS components described in this rule shall be installed, operated and maintained as specified by the manufacturer or the approved plan.

415-12 Pretreatment provisions

- A) Pretreatment components approved by the director of health under ORC section 3718.04 may be permitted for the purposes of STS size reduction or soil depth credit.
- B) Disinfection units shall not discharge disinfection residuals to a soil absorption component.
- C) Covers shall be secured and be easily accessible for monitoring and maintenance of the entire pretreatment component.
- D) Pretreatment components that are housed in a septic tank second compartment or a second septic tank in series shall assure that the pretreatment component design, or the STS design which includes the pretreatment component, prevents passage of solids greater than one sixteenth of an inch in size.
- E) Installation shall be conducted in a manner consistent with manufacturer or designer specifications to allow for proper O&M and monitoring of the pretreatment component. All pretreatment components shall have written O&M instructions with time lines for service and the registered installer and/or designer shall provide the O&M instructions to both the owner and the board of health.
- F) STS pretreatment components shall be operated, maintained, and monitored as necessary to assure compliance with any applicable standards established in this rule or the final effluent limitations set forth in a valid NPDES permit for HSTS. Sampling of NPDES discharges shall be performed in accordance with the NPDES permit monitoring requirements.
- G) To assure that a pretreatment component is operated and maintained in accordance with O&M instructions for the life of the component, as a condition of the operation permit required in rule 415-10 of these rules, the STS owner shall be required to obtain and maintain a service contract for any pretreatment component or components permitted for BOD₅/TSS sizing reduction, pathogen reduction, soil depth credit, nutrient reduction, or NPDES compliance. If O&M training is provided by the pretreatment component manufacturer/distributor, a homeowner may take the training to become their own service provider under section 415-4.3.

415-13 Soil absorption provisions

- A) Leaching systems utilizing soil absorption or percolation shall not be permitted where the depth to rock strata is less than four feet below the infiltrative surface of the proposed system. Soil absorption system components shall be designed to compensate for any limitation of a site soil's texture, structure, slope and depth

to limiting condition to allow for absorption of wastewater effluent to keep it below the surface of the ground.

- 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. 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) Soil absorption components shall maintain a vertical separation distance of at least two feet to any limiting condition with the exception of bedrock, rock, and other fragments which require at least four feet of vertical separation distance. The vertical separation distance is the depth from the infiltrative surface of the distribution system of the soil absorption component to a limiting condition.
- D) A minimum vertical separation distance of one foot of in situ soil to a limiting condition, except rock, shall be maintained. A vertical separation distance established in paragraph (A) of this rule may be reduced through the use of soil depth credits as specified in paragraph (E) of this rule, provided the minimum one foot of vertical separation distance is maintained within suitable in situ soil. The area of the suitable in situ soil to be used for the soil absorption component shall be free of any limiting conditions within the horizontal and vertical distances designated for treatment and dispersal.
- E) Where there is less than one foot of suitable in situ soil between the infiltrative surface and a limiting layer other than rock or a water source aquifer, two feet of soil depth credit may be applied, provided that a gradient is present and the system designer has satisfied the requirements for soil loading rate and linear loading rate.
- F) Soil depth credits for infiltrative surface elevation, pretreatment pathogen reduction and/or timed micro-dosed distribution shall be available as follows and in accordance with these rules. A one foot credit may be applied for those limiting conditions requiring a two foot vertical separation distance. For bedrock, rock and other fragments requiring a four foot vertical separation distance, soil depth credits may be used individually or in combinations not to exceed a maximum of two feet of credit:
 - 1) A one-to-one equivalency soil depth credit shall apply to soil absorption components that elevate the infiltrative surface of the distribution system to achieve vertical separation distance. Sand fill material in an elevated soil absorption component such as a mound system shall comply with current ODH Special Device Approval for Sand Mounds with Pressure Distribution specifications including the preparation of the sand soil interface, sand placement requirements, and the loading rate for the sand fill material.
 - 2) Soil depth credits shall apply for pathogen reduction as accepted by the department of health.

- 3) A soil depth credit of one foot shall apply when distribution to the soil absorption area provides for timed micro-dosing controlled at each point of application not to exceed one quarter gallon per emitter per dose and one gallon per four square feet of infiltrative area per day. A soil absorption component in compliance with the requirements of rule 415-12 of these rules shall be eligible for this soil depth credit when the provisions of this paragraph are met.

G) The following requirements for effluent distribution to the soil absorption component shall be met, as applicable:

- 1) Gravity distribution of effluent shall be used in accordance with these rules and any referenced design specifications in accordance with the following conditions and limitations:
 - a) Septic tank effluent may be distributed by gravity to an in situ soil absorption component meeting the vertical separation distances described under paragraph (A) of this rule.
 - b) Effluent from a pretreatment component listed on the ODH Pretreatment Component Approval list with one foot pathogen reduction credit, may be distributed by gravity to in situ soil having at least three feet of vertical separation distance to bedrock, rock, and other fragments provided there are no shallower limiting conditions.
 - c) Effluent meeting the BOD₅/TSS and/or pathogen reduction standards in rule 415-12 of these rules shall not be applied by gravity distribution to the infiltrative surface of in situ soils that have loamy sand or coarser textures and allow rapid access to ground water.

H) The soil absorption component area shall be of adequate size and configuration to disperse the effluent and prevent surface seepage. When sizing the soil absorption area the following requirements shall be met:

- 1) Soil loading rates, including basal loading rates for sand fill systems, shall be based on effluent quality and on soil structure, texture, and consistence and may be justified through reference to soil and site evaluation information.
 - a) The structure, texture, and consistence of the most limiting in situ soil layer within the vertical separation distance shall be used to determine a soil loading rate.
- 2) Linear loading rate (LLR) estimates shall be used to determine the required length of the distribution system parallel to surface contours and shall be based on soil characteristics, land slope, and depth to limiting conditions. LLR estimates may be justified through reference to soil and site evaluation information. If site and soil conditions indicate horizontal subsurface flow, the minimum horizontal isolation distances shall be increased in undisturbed areas around the perimeter or downslope of the soil absorption component as necessary for adequate dispersal and prevention of surface seepage.

- I) General requirements for designing a STS soil absorption component are as follows:
 - 1) Effluent dispersal components shall be oriented parallel to natural surface contours and shall not be sited on slopes exceeding limitations specified in these rules or product specification as referenced in accordance with this paragraph.
 - 2) The design plan or layout plan for a soil absorption component may include referenced design manuals, proprietary soil absorption component specifications including those for gravel less and chamber products, or alternative aggregate product specifications provided these do not conflict with these rules. Unless an available internet source for any referenced manual or specification is included in a design plan or layout plan, the design manual, proprietary soil absorption component specifications, or alternative aggregate product specifications shall accompany the plan. This requirement may be waived if the health district has sufficient reference material and information on file. Inclusion of referenced resources does not substitute for critical information or calculations required for board of health approval of a design or layout plan.

- J) Installation shall be conducted by a registered installer in a manner consistent with an approved plan to assure proper operation and ease of future servicing or monitoring of the soil absorption component.
 - 1) Soil moisture conditions shall be evaluated at the time of installation, and the excavation or preparation of the soil infiltration interface, such as a trench or basal area, shall not proceed when there is a risk of smearing or compaction as evidenced by a deformability test, commonly referred to as ribboning, or other means established by the board of health.
 - 2) Proprietary soil absorption components or alternative aggregate product specified in an approved design plan or layout plan shall be installed in accordance with the manufacturer's installation instructions or product specifications provided these do not conflict with these rules.
 - 3) Flow rate and distal pressure or operating head shall meet specifications and a baseline shall be recorded for future performance monitoring.
 - 4) Baseline records and any soil absorption component O&M instructions shall be provided by the installer to both the owner and the board of health as a condition of installation approval.

- K) STS soil absorption components shall be operated, maintained, and monitored as required by the operation permit issued by the board of health to assure compliance with the requirements of these rules. A registered service provider offering a service contract for a STS that includes a soil absorption component along with the component or components targeted for service, shall also service and/or monitor the soil absorption component.

415-13.1 Leaching trench requirements

- A) Total field requirement shall be divided into sections and provided with a diversion device equipped to provide flow control to each section of the field. The diversion device(s) and inspection ports shall be brought to grade and shall be provided with secured covers.
- B) Leaching field absorption area requirements for household sewage treatment systems shall be adequate to prevent water pollution or a nuisance, except those sites eliminated by rules 415-1 to 415-25 of the CCGHD Sewage Treatment Systems Rules.
- C) Leaching trench soil absorption components are subject to these rules including the following conditions:
 - 1) Paragraph (B) of this rule shall only apply to leaching trench soil absorption components with gravity distribution from a septic tank or pretreatment component in compliance with these rules.
 - 2) Site modification and siting limitations for leaching trench soil absorption components include but are not limited to the following:
 - a) A leaching trench soil absorption component shall be sited to avoid natural drainage features and depressions that may hold surface water. The plan for a leaching trench STS shall address surface water diversion as needed. An interceptor drain in compliance with paragraph (D) of rule 415-14 of these rules may be used upslope of a leaching trench soil absorption component.
 - b) Sites with large trees or numerous smaller trees are less desirable for leaching trenches and such conditions shall be avoided or shall be identified and addressed in the STS plan.
- D) In addition to the applicable installation requirements of paragraph 415-13(H) of these rules and the as-built record required in paragraph 415-10 (C) a leaching trench installation shall comply with the following requirements:
 - 1) The full soil absorption area shall be free of any site disturbance. If any disturbance or damage has occurred, installation shall not proceed and the registered installer shall contact the owner and the board of health.
 - 2) Prior to excavation the registered installer shall check all elevations in the layout plan relative to the established benchmark including the surface contour and proposed bottom elevation of each trench and the flow line elevation of other STS components to assure proper flow through the system.
 - 3) When soil conditions are suitable, leaching trenches shall be installed to meet all of the specifications and requirements of these rules. The as-built record shall provide sufficient documentation of excavated trench bottom and natural surface grade elevations to prove compliance. Leaching trench material shall be placed in a manner that prevents compaction of the infiltrative surface. Open trenches shall be avoided for any length of time to prevent impacts from sediments in runoff and windblown silt.

- 4) Suitable backfill and cover material as required in this rule or proprietary component specifications shall not be compacted and shall allow for settling up to 25% unless otherwise specified by the proprietary product installation instructions. The completed STS area shall be protected from erosion through surface water diversion and provision of suitable vegetative cover, mulching, or other specified means of protection. The land surface shall be graded so as to minimize surface drainage to the STS.
- E) The minimum distance between any leaching lines shall be six feet.
- F) The minimum distance between any leaching line and any drain line located on the lot shall be eight feet.
- G) A leaching trench shall have a minimum of twelve inches of clean gravel or stone fill, extending at least two inches above and six inches below the leaching line; such fill shall be three-fourths inch to one and one-half inches in size.
- H) A leaching trench shall have a minimum width of twelve inches and shall be installed on contour. The line shall begin and end at the same elevation with no more than plus or minus three (3) inches of variation along the surface of the ground following the contour. The depth shall be a minimum of eighteen inches but not more than twenty four inches.
- I) A leaching line shall have a maximum length of one hundred-fifty feet. Actual leaching line length shall be determined by the linear loading rate of the soil.
- J) A leaching line shall have a minimum diameter of four inches and shall have a level grade.
- K) The top of the gravel stone fill shall be covered with a pervious material such as untreated paper, or a layer of straw, or similar material before being covered with earth. The gravel shall not be visible.
- L) The land surface shall be graded so as to exclude surface drainage from the household sewage treatment site.
- M) In conjunction with any operation permit conditions or O&M management provisions required in these rules or by the board of health, the O&M of a leaching trench STS shall include but is not limited to monitoring the liquid level or capacity of the leaching trench soil absorption component, management of flow diversion mechanisms for the purpose of resting portions of the soil absorption area, and checking for surface water infiltration or clear water flows from the dwelling or structures into the STS or onto the soil absorption area.

415-13.2 Mound with pressure distribution requirements

- A) All mound systems utilized for this rule must follow Ohio Department of Health special device approval. Mound soil absorption components are subject to these rules including the following conditions:

- 1) Paragraph (B) of this rule shall only apply to a mound soil absorption system having septic tank effluent dosed to a pressure distribution network in compliance with these rules and the elevation soil depth credit provision in paragraph (E)(1) of rule 415-13 of these rules and shall not apply to a STS designed to comply with paragraph (F)(1) of rule 415-13 of these rules.
 - 2) Site modification and siting limitations include but are not limited to the following:
 - a) To the extent possible, the mound component shall be sited to avoid natural drainage features and depressions that may hold surface water. A plan for a mound soil absorption component shall address surface water diversion as needed.
 - b) Sites with boulders or numerous trees are less desirable for a mound soil absorption component. Such conditions shall be avoided to the extent possible if necessary to satisfy basal absorption requirements, or the STS plan shall increase the basal area to compensate for losses due to boulders or flush cut trees and shall include special instructions for the basal area preparation under such conditions.
- B) A registered installer providing a layout plan for an HSTS mound shall comply with rule 415-07(B) of these rules. While a design plan prepared in accordance with rule 415-07(C) of these rules may vary from the requirements of this paragraph, a layout plan prepared by a registered installer shall comply with the following requirements:
- 1) For the purpose of sizing, the soil loading rate and linear loading rate may be determined from the site and soil evaluation information required in rule 415-09 of these rules. Conservative loading rate values shall be selected on sites having depths of less than one foot from the surface of the ground to limiting conditions. When the daily average flow from a dwelling is expected to exceed sixty percent of a peak daily design flow of one hundred twenty gallons per day per bedroom, the peak daily design flow shall be increased accordingly. The peak daily design flow and the linear loading rate shall establish the minimum continuous length of the mound soil distribution laterals parallel to the natural surface contour.
 - 2) The mound sand fill depth shall be determined based on the depth to the limiting conditions and the sand fill depth shall not exceed two feet other than for a slope adjustment.
 - 3) The calculations used for determining distribution network, the distribution area width and length, the basal area width and length including any variation due to slope and the subsequent increase in sand fill depth may be required as part of a layout plan. The layout plan may include references to mound resource manuals.
 - 4) The depth of the distribution area shall be at least five inches with a minimum of three inches of durable aggregate beneath the distribution pipe and at least one inch of aggregate over the pipe. Washed or thoroughly rinsed gravel meeting the requirements of ODH Special Device Approval for Sand Mounds with Pressure Distribution may be used for the distribution

area unless the layout plans specify the use of other material such as alternative aggregate or proprietary components in accordance with rule 415-13(H)(6).

- C) In addition to the applicable installation requirements of rule 415-13(I) and the as-built record required in rule 415-07(D), a mound soil absorption component installation shall comply with the following requirements:
- 1) The full soil absorption area shall be free of any site disturbance. If any disturbance or damage has occurred, installation shall not proceed and the registered installer shall contact the owner and the board of health.
 - 2) Prior to excavation the registered installer shall check all elevations in the layout plan relative to the established benchmark including the surface contour and the flow line elevation of other STS components to assure proper flow through the system.
 - 3) When site conditions are suitable, the mound soil absorption component shall be installed to meet all of the specifications and requirements of these rules. The as-built record shall provide sufficient documentation of installed components and natural surface grade elevations to prove compliance.
 - 4) The mound shall be installed according to the layout plan and any referenced manufacturer's guidance.
 - 5) The completed STS area shall be protected from erosion through surface water diversion and provision of suitable vegetative cover, mulching, or other specified means of protection.
 - 6) The as-built record shall include the measured height of the distal operating pressure head, system flow rate, and float switch settings as baseline measures for future O&M and monitoring.
- D) In conjunction with any operation permit conditions or O&M management provisions required in these rules or by the board of health, the O&M of a mound soil absorption system shall include but is not limited to checking the mound vegetative cover for erosion or settling and any evidence of seepage on the sides or toes of the mound, flushing of distribution laterals, checking for ponding in the distribution area, monitoring the dose volume and distal operating pressure head of the distribution system, and checking for any surface water infiltration or clear water flows from the dwelling or structures into STS components or around the mound soil absorption area.
- E) Mounds designed according to the department of health's special device guidance are acceptable for STS.

415-13.3 Drip distribution requirements

Drip distribution systems must comply with the minimum siting, design, installation, and operation criteria set forth in this rule and 415-13 of these rules. All drip distribution systems utilized for this rule must obtain Ohio Department of Health system assurance approval or Technical Advisory Committee special device approval.

- A) The drip distribution requirements in this rule are subject to the following conditions:
- 1) Drip distribution components that are part of a fully supported STS in compliance with this rule shall be eligible for a soil depth credit in accordance with rule 415-13(E)(3).
 - 2) Any person intending to act as the responsible party providing a fully supported drip distribution STS shall submit written assurances of compliance with this rule to the department of health for approval.
 - 3) The board of health may not issue a permit to install for a drip distribution STS until the written assurances required in this rule have been approved by the department of health. Following the initial department of health approval, the board of health shall notify the department of health when a responsible party does not comply with the assurance requirements.
- B) Referenced manuals and technical resources may be used for general design, but a drip distribution STS shall comply with these rules and the following requirements:
- 1) Siting limitations and site modification shall include but are not limited to the following:
 - a) The drip distribution component shall be sited to avoid natural drainage features and depressions. The design plan shall address surface water diversion as needed.
 - 2) Areas designated for installation and replacement shall be undisturbed and be protected from damage or disturbance. The design plan shall specify that any disturbance or damage may result in the invalidation of the design plan. If any disturbance or damage has occurred, installation shall not proceed and the registered installer shall contact the owner, the drip distribution responsible party, and the board of health. Installation of subsurface drip tubing or preparation of the soil infiltration interface for at-grade or elevated sand fill drip fields shall not proceed when there is a risk of smearing or compaction.
 - 3) The design plan shall indicate the vertical separation distance from the drip tubing to limiting conditions and justify the placement of the drip tubing at a specific subsurface depth, at-grade, or a specific sand fill elevation not to exceed one foot. When placement is at-grade or on sand fill, basal area preparation shall be specified in the design plan. Any sand fill shall meet the specifications in rule 415-13(E)(1) of these rules. Cover material and depth specifications including precautions for freeze protection of the entire distribution system shall be included in the design plan.
 - 4) The method and calculations for sizing the soil absorption area shall be included in the design plan with reference to any manufacturer, supplier, or designer specifications but shall not be less than that determined in accordance with the site and soil evaluation information required in rule 415-09 of these rules.

- 5) Only pressure compensating emitters shall be used for STS drip distribution. The design plan shall specify the flow rate of the emitters and approximate absorption area per emitter.
- 6) Drip distribution areas shall be sited, and the drip tubing installed, parallel to natural surface contours. The length of the distribution laterals along the contour shall be determined by the linear loading rate. When site conditions indicate shallow horizontal subsurface flow, an undisturbed on-lot area of up to twenty five feet shall be preserved below or around the drip distribution area and the designated replacement area.
- 7) Any selected pretreatment component shall conform to these rules and the STS design specifications including additional capacity if needed to accommodate drip tubing and filter flushes. Use of pretreatment to justify reductions in either the soil absorption area or vertical separation distance shall be justified in the design plan and must be approved by the board of health.
- 8) Timed dosing shall be required and the combined surge and reserve capacity shall be a minimum of one and a half times the daily design flow with increased surge capacity as needed to reduce the incidence of high water alarms during peak flows. Dosing controls shall prevent flow to the drip distribution component in excess of the daily design flow. Controls shall provide a means to record alarm events, troubleshoot system malfunctions, and monitor flow over time and flow rates during both dosing and flushing events.
- 9) The drip tubing shall be maintained through an automated scouring flush at a frequency adequate to prevent the development of a coating on the interior of the drip tubing and clogging of emitters. The frequency shall be specified in the design plan and shall not be less than twice a month per zone under normal operating conditions and shall be adjustable for actual operating conditions. In the case where flush volumes may disrupt the process of a pretreatment component, added pretreatment component capacity shall be required.
- 10) For management purposes, at least two zones shall be included in the drip distribution design with an easily accessible shutoff mechanism for each zone. The timed micro-doses specified in paragraph (B)(8) of this rule and rule 415-13(E)(3) of these rules may be applied simultaneously or alternately to each zone. Air release valves shall be required at the highest elevation in each zone to vent the zone and prevent soil fines from entering the emitters during drain down after the pump shuts off.
- 11) Following installation and before STS approval by the board of health, the responsible party and/or the registered installer shall conduct a start-up procedure and document baseline measurements needed for future O&M and monitoring. Baseline measurements and monitoring information shall include but is not limited to flow rates, dose volumes, and flushing flow rates for each zone and calculation of daily flow averages. As-built records including baseline measurements and O&M instructions shall be provided to the owner, service provider, and the board of health.

- C) In conjunction with any other operation permit conditions or O&M management provisions required in these rules or by the board of health, and as a condition of an operation permit for a drip distribution STS, the board of health shall require the owner of a drip distribution STS to maintain an O&M service contract. The O&M and monitoring of the entire STS shall be conducted at least annually, or more often as required by the responsible party or the manufacturer of any component of the drip distribution STS, and shall be conducted by the responsible party acting as a registered service provider or by a registered service provider who has been qualified by the responsible party.

415-14 Site modification

- A) When siting a STS, an existing drain tile, drainage system, or other artificial subsurface drainage shall be avoided whenever possible with at least ten feet of horizontal separation from any component of a STS. If necessary, an existing drainage tile may be abandoned and rerouted to maintain at least the ten feet of separation and the abandoned section of tile shall be plugged. If existing drainage tile cannot be avoided or abandoned and rerouted and will be present in the area of a soil absorption component, the top of the drainage tile shall be considered a limiting condition subject to the four foot vertical separation distance in rule 415-13(A) of these rules.
- B) When surface water runoff will infiltrate or cause ponding on or around STS components, diversion swales shall be designed to intercept and divert surface water with specifications indicated in the layout plan or design plan. STS components shall not be sited in depressions where surface water runoff cannot be properly managed through diversion. Diversion of surface water associated with a STS shall not negatively impact other property or storm water management.
- C) Any artificial subsurface drain designed to influence a STS shall comply with the following as applicable:
 - 1) An interceptor drain shall be sited upslope of a STS when horizontal subsurface flow of water would impact a down gradient soil absorption component. The specifications for the interceptor drain, including the upslope distance from STS components and the interceptor drain outlet and outfall in accordance with paragraph (C)(3) of this rule, shall be included in the layout plan or design plan.
 - 2) An interceptor drain shall be constructed on the upslope side of the soil absorption areas of the STS.
 - 3) A drain outlet shall comply with the following:
 - a) The drain outlet, including rigid solid wall pipe and animal guard, shall be designed to allow for free flow from the invert of the pipe for the purpose of sampling.
 - b) In receiving environments where sedimentation is anticipated, there shall be at least six inches of free board between the receiving water

level or ground surface to the invert of the pipe for a gravity flow outlet. Otherwise, maintain freeboard to allow for sampling at the end of the discharge pipe.

- c) The receiving area for a drain outlet shall not pond and shall allow free flow away from the outlet during both dry and wet weather conditions to an established drainage feature.
- d) Written permission shall be obtained for placement of an effluent outlet within a right-of-way or legally established public drainage improvement. An effluent outlet associated with a STS shall be subject to the easement provisions of rule 415-06(R)(2).

415-15 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.

415-16 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 rule and shall comply with all isolation distance requirements set forth in rule 415-06(K) of these rules.
- B) The construction and design of the vault and superstructure shall prevent access by insects, fowl, or animals.
- C) The owner of a privy or holding tank shall have a registered septage hauler remove the contents of the vault or tank before the capacity is exceeded. As a condition of the operation permit required in rule 415-10 of these rules, the board of health shall require the contents of a privy or holding tank be removed in accordance with this rule and in compliance with any other operation permit or variance conditions established by the board of health.
- D) All plumbing or drain connections to the privy vault are prohibited.

415-17 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.

415-18 Inspections

- A) The health commissioner may at any reasonable time during the course of construction or any time thereafter inspect any household sewage treatment system or part thereof, sample the effluent, or take any other steps which he deems necessary to insure proper compliance with rules 415-01 to 415-25 of the CCGHD Sewage Treatment System Rules. The health commissioner may utilize inspection reports or other data submitted or obtained from reliable sources to determine compliance including but not limited to the following:
 - 1) Site review and permitting information required by these rules.
 - 2) Records or reports required as a condition of installer, septage hauler, or service provider registration.
 - 3) Information on STS performance gathered during a board of health inspection.
 - 4) Sampling and other monitoring data required as a condition of an NPDES permit issued by the OEPA and/or an operation permit issued by the board of health or from system sampling surveys performed by the board of health.
- B) No household sewage treatment system or part thereof shall be covered or put into operation until the system has been inspected and approved by the health commissioner.
- C) STS shall be operated and maintained in compliance with these rules. The board of health shall conduct O&M management in accordance with rule 415-19 of these rules.
- D) Health District inspections require that accurate information be provided to inspectors for components used in systems (capacity of tanks in gallons per inch, theory of operation of control panels, system flow rates, etc.), in order that they may complete the inspections and approve the system. This information shall be provided by manufacturers, vendors, or installers as necessary before final

approval will be given for a system.

- E) No person shall violate these rules, orders issued pursuant to these sections by the board of health, or the conditions of a registration or permit issued in accordance with these rules. Upon determining noncompliance, the board of health shall notify the owner or other responsible party of the determination of noncompliance. The board of health notification shall specify any necessary corrective action and the time line for compliance as applicable.

415-19 Operation and Maintenance, Basic System Assessments

- A) O&M in accordance with manufacturer's instructions shall be met when required as a condition of an operation permit or these rules. This may include a person securing a service contract or being certified for O&M service by a manufacturer in lieu of a required board of health inspection for which an inspection fee is charged. This shall not preclude the board of health from conducting compliance inspections for general oversight purposes nor from requiring payment of an operation permit fee for O&M management.
- B) All HSTS installed in Clermont County are included in the Basic System Assessment program and once scheduled, shall be assessed at the following intervals:
 - a) Any system with an electrical component is assessed once every 19 months.
 - b) All other systems shall be assessed once every 38 months.
- C) When a HSTS is assessed and found to be operating properly it will be issued an operation permit.
- D) Effective 1/1/2010, any HSTS or small flow commercial system that has been assessed and found to be operating properly for two consecutive assessments and that has not been found in a failing condition at any time between the scheduled assessments and that has not changed ownership during that period will be given an Acceptable Operation and Maintenance (AO&M) designation. In order for an operator to earn the AO&M designation they must meet the following criteria:
 - 1) System must be found in good working order under the health District's regular assessment criteria with no code violations of any sort cited.
 - 2) No sewage can be found reaching the surface of the ground
 - 3) Clear access to all components and discharge points must be maintained at all times
 - 4) All components must be working correctly and easily accessible with no heavy objects on the lids
 - 5) There can be no broken or missing lids.
- E) Any system designated as AO&M will be assessed at the following intervals:

- a) Any system with an electrical component is assessed once every 38 months while maintaining the AO&M designation.
 - b) All other systems shall be assessed once every 76 months while maintaining the AO&M designation.
- F) The AO&M designation is given to a specific homeowner for the onsite system at a single specific address. Whenever a home changes owners, the AO&M designation is voided. The new homeowner/operator at the specific address that previously had the AO&M designation as well as the prior homeowner/operator who had the AO&M designation at their former address must meet the criteria defined in section D before receiving the AO&M designation.
- G. Systems under a Sewage Nuisance Abatement and Remediation Plan (SNARP) are not eligible for this designation until the final step of the plan has been completed.
- H. If Health District staff are conducting a complaint investigation, an accessory structure inspection, a loan inspection, or are on site for any other reason and the system is found in a failing condition the AO&M designation will be voided. Homeowners will be required to abate the nuisance and the system will return to the assessment schedule in place prior to the AO&M designation. Homeowners must meet the criteria established in Section D to re attain the AO&M designation.
- I. Effective 1/1/2010, any system that is reported to be failing through the public health nuisance complaint program (Health District regulation 410) will immediately receive an interim Basic System Assessment. If the system is in a failing condition and is considered a public health nuisance the homeowner will be charged for the interim assessment at the same rate as the routine Basic System Assessment as well as for any reinspections required to ensure abatement of the sewage nuisance. If the nuisance complaint is found to be invalid the homeowner will not be charged for the assessment.

415-20 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 415-01 to 415-25 of the CCGHD Sewage Treatment System Rules 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 treatment 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 or decentralized/cluster sewage treatment system. Written notice from Ohio EPA stating that it is not feasible to extend public sewers for the proposed major subdivision will be required prior to accepting an application for review.

- C) Any person or firm planning to create a subdivision shall make known to the Clermont County General Health District any central sewer within 500 feet of the proposed subdivision. The Clermont County General Health District shall consider any central sewer system with 500 feet of the proposed subdivision to be practical and advisable for extension and connection thereto unless written evidence to the contrary is supplied.
- D) In anticipation of a subdivision of land, a developer may submit preliminary plans or concepts to the Clermont County General Health District for an informal plan review.
- E) Any person or development organization desiring to obtain formal Clermont County General Health District approval for a major subdivision shall complete an application for review and pay the applicable fees. The following information shall be submitted with the application for review:
 - 1) An electronic drawing file and/or sketch plan drawn on one or more sheets of standard size at a scale of one inch equals 100 feet and containing:
 - a) North arrow;
 - b) Name of adjacent street and centerline distance to closest intersection;
 - c) Property boundaries for the original tract if the corner of the original tract is within 500 feet off the proposed sub lots;
 - d) Zoning setback limits;
 - e) Road right of way limits;
 - f) Existing Residences located on proposed lot(s) and/or within 500 feet of the proposed lot(s);
 - g) Existing and proposed waterlines within 100 feet of the proposed lot(s);
 - h) Distance to existing and proposed sewer lines if such distance is less than 2,000 feet, otherwise, the applicant will state no sewer available;
 - i) Drainage features both natural, constructed, or proposed, and bodies of water and streams;
 - j) Proposed easements for water service, drainage /effluent and other utilities;
 - k) Proposed house site, auxiliary structures and paved areas;
 - l) Sewage system site(s) and type of treatment devices proposed if advanced technology systems will be used;

- m) Date the plan was prepared and name of preparer.
- 2) No survey of the proposed lot(s) will be required at the application/review stage.
- 3) The Clermont County General Health District, in conjunction with other county and state agencies, shall review the submitted documents to make a determination as to:
 - a) Their completeness;
 - b) The advisability or practicality of providing central sewers;
 - c) The advisability of using individual household sewage systems.
- F) If the application for subdivision review is approved, final individual site plan maps at a scale of one inch equals 50 feet or less for each proposed sub lot shall be prepared and submitted for review. The final individual site plans shall show the following:
 - 1) Preparer's name, address and telephone number;
 - 2) Scale, north arrow and date of drawing;
 - 3) Lot number and street address, if know;
 - 4) Subdivision name or owner's name;
 - 5) Property boundaries with courses and distances;
 - 6) Road right of ways and easement areas with boundary descriptions;
 - 7) Zoning setback limits;
 - 8) Topographic contours at one foot intervals for lots having average slopes of six percent or less, two foot intervals for lots with 6-12 percent slope and five foot intervals for lots with slope over 12 percent;
 - 9) Location of the existing or proposed house, accessory buildings, driveways, and all sewage system components on the subject lot;
 - 10) Location of all bodies of water, streams, ditches, sewers, drain tile, existing and proposed potable water supply sources and water service lines on this or adjacent lots within 100 feet of the proposed subdivision;
 - 11) For each site 5 acres or less in area, the soil properties and characteristics and boundaries of soil types, as determined from on-site borings done by a qualified soil scientist or soil specialist capable of evaluating soils in accordance with the methods of the U.S. Department of Agriculture, Soil Conservation Service may be required.

- H) Upon receipt of the final individual site plans, the Clermont County General Health District shall conduct a site visit to each proposed lot to review all submitted plans and determine compliance with the household sewage treatment rules of the State of Ohio Department of Health and Clermont County General health District
- I) Newly created parcels will only be considered for soil absorption systems. Minimum area required for the onsite sewage treatment system will be the footprint for the standard four bedroom design Millennium Mound or Leach Lines, if applicable and appropriate, plus replacement area. The parcel must support a Wisconsin Mound that will be placed on a slope less than 15%.
- J) Proposed parcels where the topography is greater than 15% will be assessed using advanced technology systems. These lots will still be required to accommodate an initial system as well as a replacement soil absorption component. An engineer qualified in the use of alternative technology, geologists, etc., may be required to submit impact analysis studies and technical design layouts on proposed lots with topography greater than 15% prior to any formal Health District approval.
- K) The person or subdivider shall field stake the property corners at the time the individual site plans are submitted.
- L) Qualified preparers of final individual site plans shall be any individual capable of producing legible drawing to scale containing the required information and may include such individuals as professional engineers and surveyors.
- M) Any parcel reconfiguration that involves a property with a failing household sewage treatment system will not be approved until corrections have been made or money is placed in escrow to complete the repairs when weather permits.
- N) 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.

415-21 Small flow on-site sewage treatment system

- A) "Small flow on-site sewage treatment system (SFOSTS)" means a system, other than a household sewage treatment system, that treats not more than one thousand gallons of sewage per day and that does not require a national pollutant discharge elimination system (NPDES) 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 rule.
- B) 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 treatment 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.
- C) 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:

- 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 (C)(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 rule, 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;
 - ii) Sized to account for flow volume and temperature; and
 - iii) Watertight access risers extended to grade with secure covers.

- D) 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 rule.

415-22 Abandoned household sewage treatment system

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

415-23 Hearing

- A) The board of health shall grant a hearing to any person affected or aggrieved by rules 415-01 to 415-25 of the CCGHD Sewage Treatment System Rules.

415-24 Variance

- A) The board of health may grant a variance from the requirements of rules 415-01 to 415-25 of the CCGHD Sewage Treatment System Rules 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 be otherwise contrary to the public interest.
- B) Experimental systems may be installed provided the director of health concurs in writing with the design and evaluation plan.
- C) Household sewage treatment system components or household sewage treatment systems differing in design or principle of operation from those set forth in rules 415-01 to 415-25, 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 treatment components or systems complying with such regulations. Such approval shall be obtained in writing from the director of health.

415-25 Onsite System Management District

- A) Any entity may submit an application to the Health District to obtain approval to manage the onsite sewage treatment systems within a defined area of Clermont County. A Management District is defined as a geographical area, usually a subdivision, containing more than 10 household treatment sewage systems where homeowners have formally agreed to have a single entity manage their septic system. The application to create an Onsite System Management District must be approved by the Board of Health. The Board of Health may establish unique requirements for a given District to ensure adequate oversight and reporting by the established Management District.
- B) Additional homes within the defined geographical area can be added to the Management District after initial creation of the Management District

by submitting an addendum to the original application identifying the address to be added and the homeowner's authorization to be included.

- C) The fee for submitting an application to the Health District to obtain approval to manage the onsite sewage treatment systems within a defined area of Clermont County is \$100 which must be paid at the time of application submission.
- D) All onsite systems in Clermont County that are part of the Operation Permit Program are issued operation permits upon satisfactory initial installation and at established intervals thereafter. Because onsite systems in an approved Onsite System Management District are part of a routine preventive maintenance program, an operation permit covering all systems contained within the district is issued to the Management District and renewed annually per the terms approved in the initial application to create the district. A total of 10% of the total number of systems in the district will be inspected each year by the Health District with no less than 2 systems per district inspected in any given year. The initial and renewed operation permits will be issued to the Management District regardless of ownership of the onsite system.
- E) The inspection fee for household sewage treatment systems under this regulation shall be calculated as follows:
 - 1) For Management Districts with greater than or equal to 20 systems the fee will be the routine charge for an operation permit inspection times 10 percent of the total number of systems in the management district.
 - 2) For Management Districts with less than 20 systems the fee will be the routine charge for an operation permit inspection times 2 (the minimum number of systems to be inspected each year).
 - 3) A Reinspection Fee will be charged for each return inspection required as a result of a malfunctioning system. The reinspection fee charged will be the same as established for all other household sewage treatment systems. The payment of the fee or reinspection fees shall be made within thirty (30) days following the date that the invoice is sent to the Management District. Unpaid fees may be collected through an action at law filed against the Management District.
- F) If a Health District inspection of a household sewage treatment system within an Onsite System Management District reveals an operational problem, an order shall be issued to the Management District to make the necessary corrections. It is the Management District's responsibility to correct the operational problem or to have the homeowner correct the problem. Any alterations or repairs required to correct a malfunctioning system within the Management District are the responsibility of the owner of the system. Any alteration or repair permits required by the Health District would be the responsibility of the system owner.
- G) The Board of Health of the Clermont County General Health District may revoke the Onsite System Management District status of any approved Management District when systems within the Management District are

not managed per the terms of the approved application or any subsequent modification thereof. When a Management District Operation Permit is revoked, all systems previously within that district are issued individual operation permits per the established renewal schedule. These operation permits will be issued directly to the owner of the onsite system and all further fees and maintenance will be the responsibility of the actual owner of the onsite system.