

Van Wert County

Household Sewage Treatment System Regulations

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Van Wert County Household Sewage Treatment System Regulations

01 Definitions

(A) “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 this chapter, the terms “alter” or “alteration” shall not include the replacement of an existing sewage treatment system or the repair of a sewage treatment system by making minor corrections to existing components or substituting parts of a component with like parts as would occur during the servicing and maintenance of a sewage treatment system.

(B) “Household Sewage Treatment System” means any sewage treatment system, or part of such a system, that receives sewage from a single family, two-

(C) “Infiltrative surface” means the contact area where sewage is applied to the soil or sand fill for the purpose of treatment and/or dispersal.

(D) “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, had had sufficient time to form the texture, structure and consistence necessary for treatment and/or dispersal.

(E) “Limiting condition” means a restrictive soil layer, bedrock, ground water, a perched seasonal high water table or other condition or combination of conditions that severely limit the treatment and/or dispersal of sewage or effluent.

(F) “NPDES” means National Pollutant Discharge Elimination System

(G) “O&M” means Operation and Maintenance

(H) “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.

(I) “Vertical separation distance” means the depth from the infiltrative surface of the soil absorption component to a limiting condition.

02 Sewage Treatment System Requirements

(A) The daily design flow for an HSTS shall be a peak flow of 120 gallons per day per bedroom.

(B) HSTS shall maintain a minimum horizontal isolation distance of 50' from any surface water impoundment, lake, river or perennial stream.

(C) HSTS shall not be sited in a 100 year flood plain.

(D) HSTS shall not be sited within or impact a jurisdictional wetland subject to a U.S. Army Corps of Engineers 404 permit and/or OEPA 401 certification or within an isolated wetland subject to sections 6111.02 to 6111.029 of the Ohio Revised Code.

02.1 Site and Soil Evaluation

(A) In order to ensure compliance with OAC 3701-29-10(B), a detailed site and soil evaluation shall be required prior to approval of any new residential building lot or any new household sewage treatment system design plan.

(B) The Board of Health shall conduct a site review for any proposed HSTS installation to complete, or review the completeness of, the site and soil evaluation information required in this rule. The Board of Health shall use the site and soil evaluation information to determine the feasibility of siting an STS.

(C) The site and soil evaluation shall include the assessment and documentation of the following:

(1) A scaled site drawing adequate to provide the required site and soil evaluation documentation including:

- (a) Dimensions of the lot or proposed lot
- (b) Location of soil borings or excavations
- (c) Existing or proposed dwellings or structures
- (d) Site disturbances, existing driveways and other hardscapes, and proposed hardscapes or related site disturbances, if known.
- (e) Location of all private water systems and surface water features on the lot and within 50' of the lot boundary.

- (2) Record of site and soil characteristics for each soil boring and/or excavation designated in paragraph (C)(1) of this rule using USDA NRCS nomenclature on a form established by Ohio Department of Health, including:
 - (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
 - (c) Documentation of any relevant surface hydrology, geologic and hydrogeologic 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 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 an HSTS in accordance with applicable rules.

(D) An installation permit for an HSTS shall not be approved by the board of health in the absence of an evaluation conducted in accordance with this rule:

- (1) The board of health shall assure that a site and soil evaluation is conducted in accordance with this rule and shall:
 - (a) determine compliance with soil absorption requirements in Ohio Administrative Code 3701-29-10 and section 10 of these rules.
- (2) The board of health may only waive the site and soil evaluation requirements when soil treatment and/or dispersal is not feasible for an HSTS replacement for an existing dwelling due to the absence of adequate area for sizing the HSTS.

(E) The detailed site and soil evaluation required under the previous section shall be performed by a soil scientist certified by a recognized state or national soils professional organization. The site and soil evaluation must be performed according to procedures established by Ohio Department of Health, and soil evaluation information must be

reported on the Ohio Department of Health “Site and Soil Evaluation for Sewage Treatment and Dispersal” form.

04 Installation Permit Application Requirements

(A) Each application for installation permit must include a scaled layout plan including all details relevant to HSTS installation, including but not limited to:

- (1) A scaled site plan showing the following:
 - (a) Vertical and horizontal benchmark with its location clearly marked at the site
 - (b) Locations of existing or proposed structures, driveways or other site disturbances
 - (c) Designated HSTS location
 - (d) HSTS layout elevations corresponding to flagged or staked locations at the site
 - (e) Horizontal isolation distances
 - (f) Designated area for complete relocation and replacement of the HSTS as required under Ohio Administrative Code 3701-29-02(I).
 - (g) North directional arrow
- (2) Written details on 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) Any additional information requested by the Board of Health related to components, materials, and installation or O&M specifications.

(B) For the purpose of verifying daily design flow, a floor plan of the home to be served by the HSTS must be included with the permit application.

04.1 Installation Approval

(A) In addition to a final inspection made by the Van Wert County Health Department, prior to system approval the installer shall complete an as-built record. The as-built record shall include:

- (1) A legible record on 8 ½ inch by 11 inch or larger pages with copies provided to the owner and to the Board of Health. Use of layout plan documents may be acceptable
- (2) Any changes from the approved layout plan. A change in location of the HSTS shall not be made without prior approval by the board of health.
- (3) A designated vertical and horizontal benchmark with its location clearly marked at the site.
- (4) Plan view drawing with elevations for installed HSTS components per the layout plan.
- (5) Any additional information requested by the Board of Health related to components, materials, and installation or O&M specifications.
- (6) The as-built drawing shall include a statement by the registered installer indicating that the STS was installed in accordance with all applicable rules and plan specifications.

(B) The Board of Health shall approve a completed installation upon the satisfactory completion of all work and documentation required by this chapter and the terms and conditions of the permit.

04.2 Alteration Permit

(A) No person shall alter an HSTS without an approved and valid alteration permit issued by the Board of Health.

(B) The Board of Health may specify terms and conditions of an or alteration permit governing the alteration of the HSTS.

(C) The Board of Health shall inspect a completed alteration.

(D) The Board of Health shall approve a completed alteration upon the satisfactory completion of all work and documentation required by this chapter and the terms and conditions of the permit.

05 Household Sewage Treatment System Contractors

(A) An installer, sewage tank cleaner, or service provider shall obtain a surety bond which provides coverage for all work performed on an STS in Van Wert County.

- (1) The surety bond 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 of Ohio as surety.
- (2) The surety bond shall be for the benefit of any aggrieved party for damages incurred as a result of a violation of this chapter and/or statewide interim sewage rules. For purposes of this rule aggrieved party means the Van Wert County Board of Health, property owner or agent of the property owner who contracts with an installer, sewage tank cleaner or service provider and whose STS is not installed serviced, maintained or abandoned in compliance with all applicable rules.
- (3) The surety bond shall be valid for the calendar year of the registration.
- (4) Any person who alleges to be an aggrieved party shall give written notification to the surety, the Van Wert County Board of Health, and the installer, sewage tank cleaner or service provider as applicable. The Board of Health may conduct an investigation as necessary to determine if a violation of this chapter has occurred.

05.1 Household Sewage Treatment System Installers

(A) Registration of HSTS installers shall expire annually on December 31.

(B) Effective January 1, 2008 any installer who wishes to obtain registration in Van Wert County must:

- 1) Meet any testing requirements established by the Van Wert County Board of Health, if the installer has not previously met state testing requirements.
- 2) Show proof of at least ~~6~~ 3 hours of continuing education obtained during the past 12 months.
- 3) Show proof of at least \$25,000 surety bond coverage for work performed in Van Wert County.
- 4) Show 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.

05.2 Sewage Tank Cleaners

(A) Sewage tank cleaners shall include contractors who remove contents from portable toilets for disposal.

(B) Registration of sewage tank cleaners shall expire annually on December 31.

(C) Effective January 1, 2008 any sewage tank cleaner who wishes to obtain registration in Van Wert County must:

- 1) Meet any testing requirements established by the Van Wert County Board of Health, if the sewage tank cleaner has not previously met state testing requirements.
- 2) Show proof of at least \$10,000 surety bond coverage for work performed in Van Wert County.
- 3) Obtain a permit from the Van Wert County Board of Health for each vehicle used to remove and dispose of the contents of septic tanks, privies and portable toilets.

(D) Sewage tank cleaning vehicle shall be labeled clearly with the company name and phone number in letters no less than 4" in height.

(E) All sewage tank cleaning equipment shall be maintained in proper operating condition and managed in a manner that prevents leakage or spills while in operation, transit or storage.

05.3 Household Sewage Treatment System Service Providers

(A) Registration of service providers shall expire annually on December 31.

(B) Effective January 1, 2008 any service provider who wishes to obtain registration in Van Wert County must:

- 1) Meet any testing requirements established by the Van Wert County Board of Health, if the service provider has not previously met state testing requirements.
- 2) Show proof of at least 3 hours of continuing education obtained during the past 12 months.
- 3) Show proof of at least \$25,000 surety bond coverage for work performed in Van Wert County.
- 4) Show proof of compliance with any training, qualification or certification conditions required for a component or system.

- 5) Conduct routine O&M services on schedule and according to requirements.
- 6) Provide to the owner a report of the serviced conducted including the date of service and a notation of any evidence of clear water infiltration, STS component deterioration or other problem conditions.
- 7) Comply with any reporting requirements established by the Board of Health

07 Septic Tank Requirements

(A) The septic tank outlet baffle shall be fitted with a vented tee or baffle including an effluent filter device that retains solids greater than 1/16 of an inch in size.

07.1 Pump and Control Requirements

(A) Pumps shall meet the following specifications:

- 1) A pump shall be rated for effluent service by the manufacturer and be a UL or CSA listed product.
- 2) The pump shall be properly sized to meet the design flow rate and total dynamic head requirements specified for the HSTS.
- 3) A quick disconnect shall be accessible in the pump discharge piping, with adequate lift attachments provided for removal and replacement of the pump and water level control assembly without having to either enter the dosing tank or pump the tank to lower the liquid level.

(B) Switches, controls, alarms and electrical components shall be US or CSA listed products, shall be installed in a manner easily accessible for routine monitoring and maintenance, and shall comply with the following:

- 1) Switches and controls shall accommodate the minimum and maximum dose capacities of the specified distribution component.
- 2) An elapsed time meter, counter, and/or flow meter shall be included in those STS having any dosing component. Time dosed STS shall include flow meters, counters and control panels with programmable timers, manual pump operation, test features, and as applicable, adjustable override settings for high water alarm conditions.
- 3) Controls shall have both audible and visual alarms. Alarms and controls shall be on a separate frequently used circuit from dedicated circuits for each pump or

motor. The Board of Health may require that the alarm be located in closer proximity to the dwelling or structure when the HSTS location is remote.

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

(C) The designer and/or installer shall assure that all electrical wiring meets the national electric code.

(D) HSTS components described in this rule shall be installed, operated and maintained as specified by the manufacturer or the approved plan.

10 Soil Absorption Requirements

(A) Soil absorption components shall maintain a vertical separation distance of at least two feet to ground water, glacial till or other such limiting conditions that will restrict the treatment and vertical movement of water through the soil. A vertical separation distance of at least four feet to bedrock must be maintained. A vertical separation distance of at least one 6 inches to a perched seasonal high water table must be maintained.

(B) A minimum depth of 12 inches of in situ soil must be maintained between the infiltrative surface of the absorption component and any limiting conditions that will restrict vertical movement of water through the soil.

(C) Soil absorption components shall be sized using the Tyler linear loading rate table included with these rules.

(D) Soil moisture conditions shall be evaluated immediately prior to installation of any soil absorption component. Installation shall not proceed when there is a risk of smearing or compaction as evidenced by a deformability test, commonly referred to as ribboning.

(E) Use of alternative absorption systems and components shall be approved by the Ohio Department of Health either under special device approval or by experimental concurrence, and shall be installed according to specifications and instructions established by the Van Wert County Board of Health and Ohio Department of Health.

(F) Soil depth credits or absorption field sizing reduction will be granted under the conditions of special device approvals or experimental concurrence granted by Ohio Department of Health.

11 Leaching Tile Field Requirements

- (A) Leaching trenches shall have a minimum width of 12” and shall not exceed 24” in width.
- (B) A leaching trench bottom shall be level along its length and shall follow the natural surface contour maintaining the specified trench depth along the entire length. The trench depth shall be determined based on the required vertical separation distance to the limiting condition.
- (C) Header lines shall be constructed of solid pipe
- (D) Distribution boxes shall be utilized to ensure uniform distribution of effluent to the trenches.
- (E) An inspection port shall be provided for the purpose of determining the liquid level in a leaching trench system. The inspection port shall be anchored and accessible with at least a 4” opening and a removable watertight cap.

22 Operation and Maintenance Requirements

- (A) For components utilized for pretreatment prior to soil absorption or as part of an NPDES compliant discharging system, and for components used under conditions of special device approval or experimental concurrence, operation and maintenance will be required as determined upon approval by the Ohio Department of Health
- (B) Minimum O&M of a leaching trench HSTS 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 into the HSTS or onto the soil absorption area.
- (C) Minimum 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 laterals, monitoring the dose volume and pressure head of the distribution system, and checking for surface water infiltration or clear water flows from the dwelling into the HSTS or around the soil absorption area.
- (D) When establishing O&M management provisions in addition to those required in this chapter, the board of health shall consider the following
 - (1) Increased levels of management related to risk conditions associated with higher STS density, STS complexity and reliability, and the location of STS in areas of high risk for surface or ground water contamination or where there

are existing unsanitary conditions due to a high incidence of STS substandard performance or failure.

(2) Recording of operation permit conditions, service contract requirements, or other O&M management information on property deeds as a means to provide notification upon transfer of property served by an STS.

(3) Utilization of private sector professionals and responsible management entities or designation of qualified agents to conduct monitoring or other O&M management responsibilities when the board of health provides oversight to assure compliance with this chapter.

(4) Inclusion of alternative O&M management mechanisms such as web-based reporting, remote telemetry, and use of publicly and privately available database programs to support O&M tracking requirements.

(5) Establishment of a household sewage treatment district in accordance with division (A)(12) of section 3718.02 of the Revised Code and the following minimum criteria and procedures:

(a) A household sewage treatment district established by a board of health shall provide a responsive approach to prevent or resolve sewage treatment problems from HSTS within an established district.

(b) When establishing a household sewage treatment district the board of health shall by formal resolution provide in writing the authority, purpose, scope, and details of the district management program including any fees.

(c) In advance of the adoption of a resolution establishing a household sewage treatment district, the board of health shall provide public notice in a newspaper of general circulation and shall inform all affected homeowners by mail at least ninety days in advance of the adoption of the resolution.

(d) The board of health may enter into a contract with any entity to administer a household sewage treatment district management program.

In establishing an O&M management program and adopting any additional provisions, a board of health may not relinquish or delegate responsibility for assuring compliance with this chapter.

Authorized by Van Wert County Board of Health: 11-13-07
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