

Summary of Proposed January 1, 2021 Revisions to the Technical Standards for Subsurface Sewage Disposal Systems

- **Cover Page, Table of Contents, and Public Health Code (PHC) Regulation Sections**
 - Cite January 1, 2021 date for the revised standards and add January 1, 2018 revision date to the list of former standards.
 - Include a reference to CT General Statute Section 22a-430 (g) in the note about the 7,500 GPD jurisdiction change per Public Act No. 17-146, Section 30. Make similar reference in the PHC B103 and B104 regulation section headings.
 - Add the Environmental Engineering Program's email address to the cover page: DPH.EnvironmentalEngineering@ct.gov.
 - Add a note to the PHC B100a regulation section that the reference to PHC Section 19-13-B103d (d) in the Technical Standards definition is a clerical/Scrivener's error as it should have been PHC Section 19-13-B103d (b).
 - Revise Appendix E title to Water Treatment Wastewater Discharges to Subsurface Sewage Disposal Systems to be consistent with actual appendix title.

- **Section I Definitions:**
 - Add the word "gravity" before pipe in the building sewer definition.
 - Replace Commissioner of Public Health with Department in the following definitions: Approved aggregate, Proprietary leaching system, Proprietary pressure-dosed dispersal system, Watertight tank seal, and Water treatment wastewater dispersal system. Note #1: Department is defined in PHC Section 19-13-B103b (a). Note #2: The reference to Commissioner shall be changed to Department throughout the standards except in cases where a regulation citation specifically cites the Commissioner.

- **Section II Location of Sewage Systems:**
 - Subsection A. Separating Distances: Change subsection title to Separating Distances to Water Supply Wells. Reference Item A in Table 1 for the minimum separating distances to water supply wells for SSDS installations and note an exception is required from the Commissioner pursuant to PHC Section 19-13-B103d (a) if the distance cannot be achieved. Move all other current language in Subsection A into Subsection B renamed Other Separating Distances and make note that groundwater control systems that leaching systems are dependent on for proper operation need only to comply with Items E and G in Table 1.
 - Change current Subsections B, C, and D to Subsections C, D, and E, respectively.
 - Subsection D. System Abandonment: Note the DOH may authorize a sewage system that is to be abandoned to be utilized for another purpose (e.g., WTW dispersal system). Note the DOH may authorize hollow structures to be filled with other material (e.g., concrete) in addition to sand or gravel.

- **Table 1 Revisions:**
 - Item H. Storm water infiltration system (SWIS): Remove sewage tank from special provision #2 that applies to non-single-family residential buildings lots, as a reduction to 25 feet is already provided for all sewage tanks. Add statement to special provision #2

that distance can be further reduced to 25 feet for a minor SWIS (e.g., rain garden) with the approval of the DOH if demonstrated that the leaching system will not be adversely impacted.

- Item J. Property line: Increase minimum separating distance to 50 feet for large (>2,000 GPD) leaching systems to down-gradient property line for new SSDSs, and SSDS repairs where feasible, when MLSS is applicable. Revise special provision #2 to indicate the reduced distance provision down to 15 feet on flat groundwater table lots applies only to small (<2,000 GPD) leaching systems. Vet revision with Code Advisory Committee.
- Item K. Water piping: Include provision to reduce distance to 25 feet if suction piping is sleeved in a solid carrier pipe.
- Item O. Utility service trench: State in the special provision that the distance doesn't apply to electric and alarm connections to sewage tanks and recommend detectable underground magnetic tracer/warning tape be provided at least one foot above buried utility lines within 25 feet of a SSDS.

- **Section III Piping:**
 - Subsection A. Building Sewers: Require a cleanout to grade on building sewer connections to slab on grade buildings at the time of a SSDS repair if a cleanout is not provided within the building per building code requirements.
 - Subsection A. Building Sewers: Stipulate that when a cleanout is provided for a multi-bend change in direction on a building sewer, it shall be provided on the first change in direction.
 - Subsection D. Drainage & Water Supply Piping: Include provision that the minimum distance between approved solid SSDS piping and water supply suction pipes is reduced to 10 feet if suction piping is sleeved in a solid carrier pipe.
 - Table 2: Change the pressure minimum pressure class of PVC AWWA C 900 pipe from 100 to 150 psi. Note that the 3" wide stainless-steel joint couplings are for 4" diameter building sewers. 4" wide couplings are required for 6" and 8" diameter building sewers. Note that Fernco couplings without shear bands can be used for joint connections between cast iron pipe and the bell end of an acceptable PVC Schedule 40 or 80 pipe.
 - Table 2-B: Change the pressure minimum pressure class of PVC AWWA C 900 pipe from 200 to 150 psi.
 - Table 3: Add PE ASTM D 2239 & D 2737 pressure pipes. These pipes are frequently used for sump pump applications. ADS N-12 Mega Green WT IB pipe (ASTM F 2648) pipe with gasketed bell/spigot (ASTM D 3212) is currently under review.

- **Section IV Design Flows:**
 - Subsection A. Residential Buildings: Make note that the reduced design flow (75 GPD) for each bedroom beyond three in a single-family residential building does not apply to the bedroom(s) in a residential outbuilding for central SSDS sizing purposes.
 - Subsection A. Residential Buildings: Multi-family residential building design flows to be discussed with Code Advisory Committee (see Home Builders and Remodelers Association of CT recommendations).

- **Section V Septic Tanks & Grease Interceptor Tanks:**
 - Subsection A. General: Add statement in Subsection 3 (Septic Tank Access) that an oversized non-stepped cover that sits on top of a tank is acceptable if the cover is prevented from lateral movement in accordance with ASTM C 1227.
 - Subsection A. General: Make note in Subsection 6 (Performance Testing) that installed tanks can be vacuumed tested prior to backfill in accordance with ASTM C 1719 to ensure water tightness.
 - Subsection B. Septic Tank Capacities: Stipulate the Department of Public Health may authorize use of septic tanks with a capacities less than 1,000 gallons for tiny houses on single-family residential building lots once criterion for such houses are incorporated into the State Building Code. Note: Appendix Q of the 2018 International Residential Code governs tiny houses and adoption of the 2018 family of codes by the original adoption date of 10/1/20 has been deemed no longer feasible by the Office of the State Building Inspector. New planned adoption date is pending.
 - Subsection B. Septic Tank Capacities: Stipulate that tank sizing for a central SSDS serving a single-family residential building and a residential outbuilding shall calculate the tank capacity based on the single-family criteria and an additional 250 gallons for each bedroom in the outbuilding.

- **Section VI Effluent Distribution, Pump Systems & Air Injection Processes**
 - Subsection C. Pump Systems: Recommend detectable underground magnetic tracer/warning tape be provided at least one foot above buried electric lines within 25 feet of the SSDS.
 - Subsection C. Pump Systems: Stipulate concrete pump chambers 1,000 gallons or larger shall provide manhole openings of at least 24 inches in diameter.

- **Section VII Percolation Tests:**
 - Current language indicates water level readings shall be taken until there is 2 to 3 inches of water remaining in the hole. Add the following phrase to the end of that sentence: unless the water level has stabilized for at least three consecutive readings and there is no more than 4 inches of water remaining in the hole.

- **Section VIII Leaching Systems:**
 - Subsection A. General: Recommend conceptual SSDSs for proposed subdivision lots be laid out with leaching systems that have an ELA credit of 10 SF/LF or less.
 - Subsection A. General: Revise the current 4th bulleted minimum separation distance provision that applies to tidally impacted groundwater tables. Delete statement about SSDSs in coastal areas with tidally impacted groundwater tables needing a minimum of 24" separation above maximum groundwater. Add language noting leaching systems on properties located in the 100-year FEMA flood zone shall be at least 30 inches above maximum groundwater and leaching systems on properties located in the 500-year FEMA flood zone shall be at least 24 inches above maximum groundwater. Vet revision with Code Advisory Committee.

- Subsection A. General: Stipulate that lots that are to be filled to address unsuitable soil conditions be prepared with necessary select fill needed for the leaching system installation and be done in a manner to protect the naturally occurring soil.
- Subsection A. General: Consider eliminating reserve leaching area requirements. Vet revision with Code Advisory Committee (see Home Builders and Remodelers Association of CT recommendations).
- Subsection A. General: Clarify that MLSS is not applicable when the receiving soil depth (RS Depth) is greater than 60 inches rather than more than 60 inches of receiving soil. Delete the word “essentially” that is in parenthesis along with “0 percent slope”.
- Subsection E. Proprietary Leaching Systems & Proprietary Pressure-Dosed Dispersal Systems: Add the nine GLF 72 Series GreenLeach Filter proprietary leaching systems approved by DPH in an October 25, 2018 approval letter to the list of approved GreenLeach products.
- Subsection F. Leaching System Sizing: Revise the language in the 1st bullet in category 1 (Residential Buildings) to allow one-bedroom sizing for tiny houses on single-family residential building lots once criterion for such houses are incorporated into the State Building Code. Note: Appendix Q of the 2018 International Residential Code governs tiny houses and adoption of the 2018 family of codes by the original adoption date of 10/1/20 has been deemed no longer feasible by the Office of the State Building Inspector. New planned adoption date is pending.
- Subsection F. Leaching system Sizing: Revise the language in the 3rd bullet (central SSDSs) in category 1 (Residential Buildings) to stipulate that the ELA for each bedroom in a residential outbuilding shall be based on the multi-family classification.
- Subsection G. Leaching System Product Approvals, ELA, Center to Center (C to C) Spacing: Stipulate the Department may approve multi-product single-trench leaching systems that are exempt from the C to C spacing requirements and note internal interfaces shall not be credited unless a minimum of 4 inches is provided between the products. Note: This item was on the November 29, 2018 CAC meeting agenda.
- **Section IX Groundwater and Surface Water Drainage:**
 - No changes
- **Section X Water Treatment Wastewater:**
 - Revise requirement #2 to stipulate a B100a review may be warranted for WTW discharges that exceed 150 gallons per backwash cycle.
- **Section XI Non-Discharging Toilet & Sewage Disposal Systems:**
 - Subsection C. Incineration Toilets: Lower the minimum combustion temperature from 1,400 to 1,000 degrees Fahrenheit and stipulate that incineration can occur when the toilet lid is open if the toilet has a combustion chamber that is separate from the collection bowl.

- **Forms #1, 2, 2A, 3, & 4:**
 - No changes

- **Appendix A, MLSS Revisions:**
 - Stipulate multiple leaching systems on a lot that rely on the same receiving soil (e.g., <50' apart on sloped lots) shall be evaluated collectively. Note: This is currently in the code however it doesn't indicate it's only for systems on the same lot.
 - Recommend all of the leaching system's receiving soil be on the building served property. This would ensure that on a MLSS applicable lot, a small leaching system (<2,000 GPD) is at least 25 feet from a down-gradient property line and a large leaching system (2,000 GPD and greater) is at least 50 feet from a down-gradient property line. This would ensure that on a MLSS applicable lot that has a flat groundwater table and radial flow is available, a leaching system is at least 25 feet from property lines.
 - Delete the word "essentially" that is in parenthesis along with "0 percent".
 - Add a statement to Category 3 (Non-compliant repairs) stipulating leaching systems that solely utilize select fill as receiving soil (Diagram 6) shall be designed a minimum of 24" above maximum groundwater. Select fill can have a percolation rate faster than 5 minutes per inch. Note: Section VIII Leaching Systems requires a 24" minimum separation above maximum groundwater if the receiving soil has a percolation rate faster than 5 minutes per inch.
 - Add statement in Flow Factor chart that for a central SSDS serving a single-family home and a residential outbuilding shall utilize a 0.5 increment for each bedroom in the outbuilding.

- **Appendix B, Approved Septic Tank Effluent Filters**
 - No changes.

- **Appendix C, Approved Filter Fabric for Covering Stone Aggregate**
 - Replace list with the list of approved filter fabrics dated August 14, 2019 and remove Carthage Mills M35 filter fabric from the list.

- **Appendix D, Approved Non-Concrete Septic Tanks:**
 - No changes.

- **Appendix E, Authorized Water Treatment Wastewater Discharges to SSDS's**
 - Add arsenic, lead, and heavy metal adsorption medias (e.g., titanium oxide, iron oxide, activated alumina) to the list of water treatment wastewater that are authorized to discharge a SSDS.