



STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH SECTION
ENVIRONMENTAL ENGINEERING PROGRAM

Summary of the January 1, 2011 revisions to the Technical Standards for Subsurface Sewage Disposal Systems

- **Section I Definitions:**
 - Bedroom definition revised to remove “per Building Code requirements” when referencing habitable space. Added minimum floor area (70 square feet) for new bedrooms.
 - Free draining material definition revised to note that such material is coarser than surrounding excavation material. Onsite sand and gravel can be used to backfill utility and storm water trenches in close proximity (5’ to 25’) to subsurface sewage disposal systems.
 - Two (2) inch nominal tire chip aggregate definition revised to remove reference DEP’s General Permit for the distribution of such material since permit has expired. No one currently has a DEP permit to distribute tire chips in CT for leaching system construction.
 - Watertight tank seal definition added that includes reference to ASTM seal standards (C 1644, C 923) for pipe to tank connections (inlet & outlet seals).

- **Section II Location of SSDSs:**
 - Language added stipulating that minimum separating distances are measured horizontally; except for non-vertical closed loop geo-exchange bore holes that utilize measurements taken from the closest point of the borehole.
 - Special provision #3 under Item A (Water Supply Wells, Springs, Domestic Water Suction Pipes) added to allow a reduced distance (25’) between water suction pipes and watertight tanks.
 - Separating distance to closed loop geo-exchange bore hole or trench changed to 50 feet, and a special provision provides a reduction to 25 feet for watertight tanks.
 - Lot line relocations reviewed per PHC Section 19-13-B100a (e) shall provide the minimum separating distance to property lines cited in Item I.
 - Language for property line separating distances reworded, not changed, so that distance reductions noted in special provisions.
 - Drains (Upgradient & Downgradient) combined into one item (Item G).
 - Plan adherence language expanded to note that modifications to approved plan shall be authorized by the plan designer and approved by the local director of health.

- **Section III Piping:**
 - Wording in Tables 2 and 2-D revised to clarify that the approved piping is also for sewer piping that is in close proximity (25’ – 75’) from domestic water suction pipes.
 - Public sewer lateral Table 2-A revised to indicate that grease interceptor tanks are sources of pollution that need to be kept a minimum of 75 feet from all water supply wells (Greater distances for larger wells). Higher-grade piping (i.e., Schedule 40, ASTM 1785) specified for building sewer between building and grease interceptor tank effective January 1, 2011, which is consistent with the building sewer requirements for septic systems.
 - Language in Tables 2-A & 2-B modified to clarify why public sewer piping & joint specifications are included in the Technical Standards, and provisions provided for DPH’s Water Supply Section & Private Well Program to approve other public sewer piping that is proposed to be placed within the sanitary radius of water supply wells.



Phone: (860) 509-7296, Fax: (860) 509-7295
Telephone Device for the Deaf (860) 509-7191
410 Capitol Avenue - MS # 51SEW
P.O. Box 340308 Hartford, CT 06134
An Equal Opportunity Employer

- **Section IV Design Flows:**

- The language in subsection C (Water Usage Monitoring) revised to stipulate that large system (>2,000 GPD) plans shall include provisions to monitor domestic sewage generation via the use of water meters or other available means (i.e., pump cycling and dose volume documentation).
- The language in subsection E (Management Programs) revised stipulate that proposed ordinances and regulations shall be submitted to DPH for review prior to adoption.

- **Section V Septic Tanks & Grease Interceptor Tanks:**

- Language added recommending replacement of single-compartment septic tanks, especially undersized tanks, at time of leaching system repairs. Note added about assessments of single compartment tanks if they are to remain in place to confirm tank is in satisfactory condition and is properly baffled. Note: Some proprietary leaching system companies don't support use of their products w/ single compartment tanks.
- Stipulation added that septic tanks shall have a minimum of 6 inches of cover.
- Current language stipulates tanks must provide a minimum detention time of 2 hours under peak flow conditions. Statement added that mathematically, the detention time is the volume of the liquid in the tank divided by the flow rate through the tank.
- Note added that effluent filters can be used in grease interceptor tanks however the manufacturer of the filter must specify suitability for this type of waste.
- Performance testing (Leakage Testing) language modified to note that such testing shall be required whenever tightness is critical (i.e., infiltration into a pump chamber is a concern or when a tank is proposed within the sanitary radius of a water supply well). Wording on vacuum testing revised for consistency with recently published ASTM standard C1227-10a for septic tanks.
- Additional exceptions granted to the septic tank standard ATSM C1227-10a. Watertight tank seals (See new definition) required only if specified by plan designer. Effluent filters do not have to meet the performance criteria of NSF/ANSI Standard 46-2005, however approved filter companies must notify DPH by July 1, 2011 as to whether their filters meet this specification.

- **Section VI Effluent Distribution, Pump Systems & Air Injection Processes:**

- Wording added noting pump and electrical connections shall be readily accessible from the ground surface, and that the piping must be attached to the pump close enough to the top of tank under the manhole to allow for servicing, and a quick-disconnect device shall be utilized to allow easy removal of the pump.
- Stipulation added that pump chambers in shallow groundwater areas must utilize watertight tank seals.
- Pump chamber diagram (Figure 11) added.

- **Section VII Percolation Tests:**

- Language revised to reference percolation rates of receiving soil rather than naturally occurring soil.

- **Section VIII Leaching Systems:**

- Note added to subsection E (Proprietary Leaching Systems) stipulating it is the responsibility of the company to ensure that installers are properly trained on installation protocols.
- Language added to subsection G (Leaching System Approvals etc) stating that DPH can require third party/independent test data in conjunction with reviews/approvals of proprietary leaching systems that are deemed substantially different than those currently approved.
- S-Box, LLC has been dissolved, and their proprietary leaching systems have been assigned to Geomatrix Systems, LLC. Note added to Geomatrix subsection about pending S-Box product re-approvals.
- Recently approved Geomatrix products (GST 37 Series & GeoMat Edge U-Shape) added, and note added that GeoMat Edge & GeoU systems must be installed in conjunction w/ Soil Air System.
- Recently approved GreenLeach Filter products (Series 37) added.
- Maximum ELA credit rating (29.9 SF/LF) added.

- **Section IX Groundwater, Roof, Cellar and Yard Drainage:** None
- **Section X Other Wastewater:**
 - Language revised to note that DPH may authorize the discharge of minor volumes water treatment wastewater to a SSDS if DPH deems the discharge to be incidental. Note: New DEP softener/water treatment wastewater contact person: James Creighton (860 424-3681), james.creighton@ct.gov
- **Section XI Non-Discharging Systems:** None
- **Forms #1, 2, 3 & 4:**
 - Minor revisions to Final Inspection Report/Form #3: Tire chip reference eliminated, Comment added about checking system elevations
- **Appendix A, MLSS Revisions:**
 - A new term, receiving soil, is defined.
 - Language revised to note that new systems and code-complying areas (B100a Intensification of Use: Conversions, Changes in Use) shall provide leaching system spreads meeting MLSS that is calculated based on the depth of naturally occurring receiving soil only.
 - Exception language added for repairs that can't meet MLSS calculated based on naturally occurring soil. Such repairs require a non-compliant repair (NCR) MLSS assessment that takes into account the hydraulic capacity of existing receiving soil (fill and natural soil) and fill included in the repair design. Five criteria listed for the NCR MLSS calculation.
 - PE plans required if 50% of NCR MLSS cannot be provided or when certain minimum receiving soil depths cannot be provided.
 - Language revised to indicate that the permitted flow for non-compliant repairs on the discharge permit takes into account the most limited percentage of the required ELA or NCR MLSS provided.
 - Note added that for potential repair areas identified for B-100a compliance purposes for proposed non-flow increasing building additions the required MLSS shall be equivalent to the NCR MLSS.
- **Appendix B & Appendix C:** None
- **Appendix D, Approved Non-Concrete Septic Tanks:**
 - Update appendix to include the approved tanks based on most recent list revision (3/1/10).