**Section 905.55 Subsurface Seepage System Design Requirements**

After January 1, 2014, when designing a subsurface seepage system, the absorption capacity of the soil shall be determined by subsection (a). After January 1, 2014, subsection (b) shall not be used to determine design requirements for a subsurface system.

a) Soil Investigation

1) Soil investigations shall be conducted in the following manner:

A) Determination of soil characteristics on sites proposed for development with private sewage disposal systems shall be based on soil boring data collected by a soil classifier or an Illinois licensed Professional Engineer.

B) There shall be a minimum of 3 borings per soil absorption system site. The soil borings shall be at least 50 feet apart, and the proposed subsurface seepage system shall be located within the area where the soil borings were located. More soil borings may be necessary for accurate and appropriate evaluation of a site where there is some concern about the consistency of the soil materials. One of the borings shall be made at the lowest elevation of the proposed absorption field area. Borings shall extend a minimum of 60 inches below the natural ground surface. An observation pit shall be used in gravelly materials.

C) Observation and determination of soil characteristics may also be determined from a pit dug by a backhoe or other excavating equipment. The Department or local authority may require soil pits (backhoe excavation) in cases where ground is frozen, where the soil materials are considerably varied in texture, where there has been previous or current fill material or cutting of soils, or where gravelly soils are encountered. Soil pits shall be prepared at the perimeter of the expected soil absorption area to minimize damage to natural soil structure. Soil pits shall extend a minimum of 60 inches below the natural ground surface.

D) Site characteristics to be described include zones of seasonal and permanent water saturation, United States Department of Agriculture (USDA) soil textural changes; USDA soil structural features for each horizon, slope, compaction and depth; soil coloration; consistence; coatings; depth of limiting layer; depth of soil mottling; internal drainage classification; permeability range; and other limiting soil characteristics that may reduce permeability. The following reference materials shall be used as a guide for describing and classifying soil: Field Book for Describing and Sampling Soils, Soil Taxonomy, and Soil Survey Manual.

2) The following persons are qualified to conduct soil investigations:

A) any person who meets the definition of soil classifier in Section 905.10;

B) an Illinois licensed Professional Engineer;

C) an employee of a local health department who has 3 years of experience in designing or approving private sewage disposal systems using soil classification information and 6 semester hours of soils-related coursework;

D) an employee of a local health department with 5 years of experience reviewing the design and approving private sewage disposal systems using soil classification information under the direct supervision of those persons listed in subsection (a)(2)(A), (B) or (C).

3) If conflicting soils investigation information is provided about a given site, a third Soil Classifier may be requested to provide additional information or help to resolve the conflict. A National Resources Conservation Service (NRCS) Soil Scientist who is also a Soil Classifier may be contacted for technical information or interpretation.

b) Percolation Tests

1) Performance of Percolation Tests. At least 3 separate percolation tests, a minimum of 50 feet apart, shall be performed at the site of each proposed subsurface seepage system.

2) Procedure for Performing Percolation Tests. Percolation tests shall be performed in accordance with the procedure outlined in Appendix A, Illustration G. Alternate procedures for performing percolation tests may be submitted to the Department for review. If determined to be as stringent as that described in Appendix A, Illustration G, the alternate procedure will be approved.

3) The Department or its agent may choose not to accept percolation data results and may require a soil investigation if soils information, permits for private sewage disposal systems in proximity to the proposed site, direct observation or other information shows conditions that will have an impact on the design, construction, installation, modification or performance of the private sewage disposal system.

(Source: Amended at 37 Ill. Reg. 14994, effective August 28, 2013)