



Standard Practice for Subsurface Site Characterization of Test Pits for On-Site Septic Systems¹

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INTRODUCTION

Many State and local jurisdictions have requirements for evaluating sites for approval of on-site septic systems. This practice provides a method to describe and interpret subsurface characteristics to evaluate sites for septic systems. All characteristics used in this practice influence the ability of a site to provide treatment and disposal of septic tank effluent. However, this practice is not meant to be an inflexible description of investigation requirements. State and local jurisdictions may require fewer or greater numbers of subsurface features to evaluate a site.

This practice primarily follows the U.S. Department of Agriculture, Soil Conservation Service (SCS) soil classification system, which encompasses a systematic framework for soil morphological characterization. The SCS classification the most prevalent system in use for on-site septic systems. This practice can be complemented by application of other soil description techniques as appropriate, such as the Unified Soil Classification System (D2485).

1. Scope

1.1 This practice covers procedures for the characterization of subsurface soil conditions at a site as part of the process for evaluating suitability for an on-site septic system. This practice provides a method for determining the usable unsaturated soil depth for septic tank effluent to infiltrate for treatment and disposal.

1.2 This practice describes a procedure for classifying soil by field observable characteristics within the United States Department of Agriculture, Soil Conservation Service (SCS) classification system.² The SCS classification system is defined in Refs (1–2),³ not in this practice. This practice is based on visual examination and manual tests that can be performed in the field. This practice is intended to provide information about soil characteristics in terms that are in common use by soil scientists, public health sanitarians, geologists, and engineers currently involved in the evaluation of soil conditions for septic systems.

1.3 This procedure can be augmented by Test Method D422, when verification or comparison of field techniques is required. Other standard test methods that may be used to augment this practice include: Test Methods D2325, D3152, D5093, D3385, and D2434.

1.4 This practice is not intended to replace Practice D2488 which can be used in conjunction with this practice if construction engineering interpretations of soil properties are required.

1.5 This practice should be used in conjunction with D5879 to determine a recommended field area for an on-site septic system. Where applicable regulations define loading rates-based soil characteristics, this practice, in conjunction with D5925, can be used to determine septic tank effluent application rates to the soil.

1.6 This practice should be used to complement standard practices developed at state and local levels to characterize soil for on-site septic systems.

1.7 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.8 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

1.9 *This practice offers a set of instructions for performing one or more specific operations. This document cannot replace*

¹ This practice is under the jurisdiction of ASTM Committee D18 on Soil and Rock and is the direct responsibility of Subcommittee D18.01 on Surface and Subsurface Characterization.

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² In 1995, the name of the SCS was changed to Natural Resource Conservation Service. This guide uses SCS rather than NRCS because referenced documents were published before the name change.

³ The boldface numbers given in parentheses refer to a list of references at the end of the text.