



Designation: D5787 – 20

Standard Practice for Monitoring Well Protection At or Near Land Surface¹

This standard is issued under the fixed designation D5787; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

INTRODUCTION

This practice for monitoring well protection is provided to promote durable and reliable protection of installed monitoring wells against natural and anthropogenic damage, which may compromise the condition of the well to provide representative potentiometric and water quality data for which it was constructed. The practices contained promote the development and planning of monitoring well protection during the design and installation stage.

1. Scope*

1.1 This practice identifies design and construction considerations to be applied to monitoring wells for protection from events, which may impair the intended purpose of the well such as water level or water quality monitoring data.

1.2 The installation and development of a well is a costly and detailed activity with the goal of providing representative samples and data throughout the design life of the well. Damage to the well at the surface frequently results in the loss of the well or can potentially impact measured water level and/or groundwater quality data. This standard provides for access control so that tampering with the installation should be evident.

1.3 This practice may be applied to other surface or subsurface monitoring devices, such as piezometers, permeameters, temperature or moisture monitors, or seismic devices.

1.4 *Units*—The values stated in SI units are to be regarded as the standard. The inch/pound units given in parentheses are for information only. Reporting of test results in units other than SI shall not be regarded as non-conformance with the standard.

1.5 All observed and calculated values shall conform to the guidelines for significant digits and rounding established in Practice **D6026**, unless superseded by this standard.

1.6 *This practice offers a set of instructions for performing one or more specific operations. This document cannot replace education or experience and should be used in conjunction with professional judgment. Not all aspects of this practice may*

be applicable in all circumstances. This ASTM standard is not intended to represent or replace the standard of care by which the adequacy of a given professional service must be judged, nor should this document be applied without consideration of a project's many unique aspects. The word "Standard" in the title of this document means only that the document has been approved through the ASTM consensus process.

1.7 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.8 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

D653 Terminology Relating to Soil, Rock, and Contained Fluids

D5918 Test Methods for Frost Heave and Thaw Weakening Susceptibility of Soils

D5092 Practice for Design and Installation of Groundwater Monitoring Wells

D6026 Practice for Using Significant Digits in Geotechnical Data

3. Terminology

3.1 *Definitions:*

¹ This practice is under the jurisdiction of ASTM Committee **D18** on Soil and Rock and is the direct responsibility of Subcommittee **D18.21** on Groundwater and Vadose Zone Investigations.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

*A Summary of Changes section appears at the end of this standard