



Standard Guide for Selection and Documentation of Existing Wells for Use in Environmental Site Characterization and Monitoring¹

This standard is issued under the fixed designation D 5980; 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.

1. Scope

1.1 This guide covers the use of existing wells for environmental site characterization and monitoring. It covers the following major topics: criteria for determining the suitability of existing wells for hydrogeologic characterization and ground-water quality monitoring, types of data required to document the suitability of an existing well, and the relative advantages and disadvantages of existing large- and small-capacity wells.

1.2 This guide should be used in conjunction with Guide D 5730, that provides a general approach for environmental site investigations.

1.3 This guide does not specifically address design and construction of new monitoring or supply wells. Refer to Practices D 5092 and D 5787.

1.4 This guide does not specifically address ground-water sampling procedures. Refer to Guide D 5903.

1.5 The values stated in SI units are to be regarded as the standard. However, dimensions of materials used in the water well industry are given in inch-pound (English) units by convention; therefore, inch-pound units are used where necessary in this guide.

1.6 *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.*

1.7 *This guide offers an organized collection of information or a series of options and does not recommend a specific course of action. This guide cannot replace education or experience and should be used in conjunction with professional judgment. Not all aspects of this guide may be applicable in all circumstances. This guide 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 guide 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.

2. Referenced Documents

2.1 Pertinent guides addressing specific information necessary to utilize existing wells for hydrologic and water-quality data for environmental site characterization. A comprehensive list of guides, standards, methods, practices, and terminology is contained in Guide D 5730. Other guidance documents covering procedures for environmental site investigations with specific objectives or in particular geographic settings may be available from federal, state, and other agencies or organizations. The appropriate agency or organization should be contacted to determine the availability and most current edition of such documents.

2.2 ASTM Standards:²

D 653 Terminology Relating to Soil, Rock, and Contained Fluids

D 4750 Test Method for Determining Subsurface Liquid Levels in a Borehole or Monitoring Well (Observation Well)

D 5092 Practice for Design and Installation of Ground Water Monitoring Wells in Aquifers

D 5254 Practice for a Minimum Set of Data Elements to Identify a Ground-Water Site

D 5408 Guide for Set of Data Elements to Describe a Ground-Water Site; Part One—Additional Identification Descriptors

D 5409 Guide for Set of Data Elements to Describe a Ground-Water Site; Part Two—Physical Descriptors

D 5410 Guide for Set of Data Elements to Describe a Ground-Water Site; Part Three—Usage Descriptors

D 5474 Guide for Selection of Data Elements for Ground-Water Investigations

D 5521 Guide for Development of Ground-Water Monitoring Wells in Granular Aquifers³

D 5730 Guide for Site Characterization for Environmental

¹ This guide is under the jurisdiction of ASTM Committee D18 on Soil and Rock and is the direct responsibility of Subcommittee D18.21 on Ground Water 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.

³ Withdrawn.