



Standard Guide for Installation of Direct Push Groundwater Monitoring Wells¹

This standard is issued under the fixed designation D6724/D6724M; 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 reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

1. Scope*

1.1 This guide describes various direct push groundwater monitoring wells and provides guidance on their selection and installation for obtaining representative groundwater samples and monitoring water table elevations. Direct push wells are used extensively for monitoring groundwater quality in unconsolidated formations. This guide also includes discussion of some groundwater sampling devices which can be permanently emplaced as monitoring wells.

1.2 This guide does not address the single event sampling of groundwater using direct push water samplers as presented in Guide [D6001](#). The methods in this guide are often used with other tests such as direct push soil sampling (Guide [D6282](#)) and the cone penetrometer test (Guide [D6067](#)). The guide does not address the installation of monitoring wells by rotary drilling or sonic drilling methods such as those presented in Practice [D5092](#). Techniques for obtaining groundwater samples from monitoring wells are covered in Guides [D4448](#), [D7929](#), and Practice [D6771](#). Practice [D6725](#) addresses direct push wells using pre-packed screens.

1.3 The installation of direct push groundwater monitoring wells is limited to unconsolidated soils and sediments including clays, silts, sands, and some gravels and cobbles. Penetration may be limited, or damage may occur to equipment, in certain subsurface conditions; some of which are discussed in [5.5](#). Information in this guide is limited to groundwater monitoring in the saturated zone.

1.4 The values stated in either inch-pound units or SI units presented in brackets are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in 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values shall conform to the guidelines for significant digits and rounding established in Practice [D6026](#), unless superseded by this standard.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 guide offers an organized collection of information or a series of options and does not recommend a specific course of action. This document cannot replace education or experience and should be used in conjunction with professional judgement. Not all aspects of this guide 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.

1.6.1 This guide does not purport to comprehensively address all of the methods and issues associated with monitoring well installation. Users should seek input from qualified professionals for the selection of proper equipment and methods that would be the most successful for their site conditions. Other methods may be available for monitoring well installation, and qualified professionals should have flexibility to exercise judgement concerning alternatives not covered in this guide. The practice described in this guide is current at the time of issue; however, new, alternative, and innovative methods may become available prior to revisions. Therefore, users should consult with manufacturers or producers prior to specifying program requirements.

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 and health practices and determine the applicability of regulatory requirements prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

- [D653 Terminology Relating to Soil, Rock, and Contained Fluids](#)
- [D3740 Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction](#)
- [D4448 Guide for Sampling Ground-Water Monitoring Wells](#)

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 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.