



Standard Guide for Maintenance and Rehabilitation of Groundwater Monitoring Wells¹

This standard is issued under the fixed designation D5978/D5978M; 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 guide for maintenance and rehabilitation promotes procedures appropriate to groundwater monitoring wells installed to evaluate the extent and nature of contamination, progress of remediation, and for long-term monitoring of either water quality or water level.

1. Scope*

1.1 This guide covers an approach to selecting and implementing a well maintenance and rehabilitation program for groundwater monitoring wells. It provides information on symptoms of problems or deficiencies that indicate the need for maintenance and rehabilitation. It is limited to monitoring wells, that are designed and operated to provide access to, representative water samples from, and information about the hydraulic properties of the saturated subsurface while minimizing impact on the monitored zone. Some methods described herein may apply to other types of wells although the range of maintenance and rehabilitation treatment methods suitable for monitoring wells is more restricted than for other types of wells. Monitoring wells include their associated pumps and surface equipment.

1.2 This guide is affected by governmental regulations and by site specific geological, hydrogeological, geochemical, climatological, and biological conditions.

1.3 *Units*—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.

1.4 All observed and calculated values shall conform to the guidelines for significant digits and rounding established in Practice D 6026, unless superseded by this standard.

1.5 *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.

1.6 *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 judgment. 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.*

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

D4044 Test Method for (Field Procedure) for Instantaneous Change in Head (Slug) Tests for Determining Hydraulic Properties of Aquifers

D4412 Test Methods for Sulfate-Reducing Bacteria in Water and Water-Formed Deposits

D4448 Guide for Sampling Ground-Water Monitoring Wells

D4750 Test Method for Determining Subsurface Liquid Levels in a Borehole or Monitoring Well (Observation

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.

Current edition approved July 1, 2016. Published July 2016. Originally approved in 1996. Last previous edition approved in 2011 as D5978 – 96 (2011) ^{ϵ 1}. DOI: 10.1520/D5978_D5978M-16.

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.