



Standard Guide for Set of Data Elements to Describe a Groundwater Site; Part One—Additional Identification Descriptors¹

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^{ε1} NOTE—The units statement in 1.4 was revised and inch-pound units were deleted throughout editorially in August 2010.

1. Scope

1.1 This guide covers Part One of three guides to be used in conjunction with Practice D5254 that delineates the data desirable to describe a groundwater data collection or sampling site. This guide describes additional information beyond the minimum set of data elements that may be needed to identify a groundwater site. Part Two identifies physical descriptors, such as construction, for a site, while Part Three identifies usage descriptors, such as monitoring, for an individual groundwater site.

NOTE 1—A groundwater site is defined as any source, location, or sampling station capable of producing water or hydrologic data from a natural stratum from below the surface of the earth. A source or facility can include a well, spring or seep, and drain or tunnel (nearly horizontal in orientation). Other sources, such as excavations, driven devices, bore holes, ponds, lakes, and sinkholes, that can be shown to be hydraulically connected to the groundwater, are appropriate for the use intended.

NOTE 2—Part Two (Guide D5409) includes individual site characteristic descriptors (7 data elements), construction descriptors (56 data elements), lift descriptors (16 data elements), geologic descriptors (26 data elements), hydraulic descriptors (20 data elements), and spring descriptors (11 data elements). Part Three (Guide D5410) includes monitoring descriptors (77 data elements), irrigation descriptors (4 data elements), waste site descriptors (9 data elements), and decommissioning descriptors (8 data elements). For a list of descriptors in this guide, see Section 4.

1.2 These data elements are described in terms used by groundwater hydrologists. Standard references, such as the Glossary of Geology and various hydrogeologic professional publications, are used to determine these definitions. Many of the suggested elements and their representative codes are those established by the Water Resources Division of the U.S. Geological Survey and used in the National Water Information Systems computerized data base (1-9).²

NOTE 3—The purpose of this guide is to suggest data elements that can be collected for groundwater sites. This does not uniquely imply a computer data base, but rather data elements for entry into any type of permanent file.

NOTE 4—Component and code lists given with some of the data elements, for example “Format of Other Data,” are only suggestions. These lists can be modified, expanded, or reduced for the purpose intended by the company or agency maintaining the groundwater data file.

NOTE 5—Use of trade names in this guide is for identification purposes only and does not constitute endorsement by ASTM.

1.3 This guide includes the data elements desirable to identify a groundwater site beyond those given in the “Minimum Set of Data Elements.” Some examples of the data elements are map identification, permitting facts, and supporting information. No single site will need every data element, for example, many groundwater sites do not need the data elements described in the legal record group. Each record (group of related data elements) for a site has mandatory data elements, such as the date for the ownership record. However, these elements are considered necessary only when that specific record is gathered for the site.

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

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