



Standard Practice for Monitoring Well Protection¹

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INTRODUCTION

This practice for monitoring well protection is provided to promote durable and reliable protection of installed monitoring wells against natural and man caused damage. 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 damage and/or impacts.

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. Damages to the well at the surface frequently result in loss of the well or changes in the data. This standard provides for access control so that tampering with the installation should be evident. The design and installation of appropriate surface protection will mitigate the likelihood of damage or loss.

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

1.4 *Units*—The values stated in SI (inch-pound) units are to be regarded as standard. No other units of measurement are included in this standard.

1.5 *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.*

1.6 *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.*

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

3. Terminology

3.1 *Definitions:*

3.1.1 For definitions of common technical terms in this standard, refer to Terminology **D653**.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *barrier, n*—any device that physically prevents access or damage to an area.

3.2.2 *barrier markers, n*—plastic, or metal posts, often in bright colors, placed around a monitoring well to aid in identifying or locating the well.

3.2.3 *bollards, n*—steel pipe, typically from 10 to 30 cm (4 to 12 in.) in diameter and normally filled with concrete or grout that are placed around a well location to protect the well from physical damage, such as from vehicles.

3.2.4 *sealed cap, n*—a PVC, steel, or alloy pipe end cap, normally gasketed or sealed, that is designed to prevent water or other substances from entering into, or out of the well riser.

4. Significance and Use

4.1 An adequately designed and installed surface protection system will mitigate the consequences of natural damage (that

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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.