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Standard Guide for Basic Wilderness GPS/GNSS Use (GPS/GNSS-IW) Endorsement¹

This standard is issued under the fixed designation F3071; 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 establishes the minimum knowledge, skills, and abilities required to use a GPS/GNSS² receiver to determine one's position, and collect location data, in the wilderness.

1.2 This guide applies to the use of a GPS/GNSS receiver on land, on and off roads, and on small bodies of water, wherever GPS/GNSS signals can be received.

1.3 This guide applies to the use of a GPS/GNSS receiver in disaster areas where local positioning aids or references may be lost or damaged.

1.4 This guide does not apply to the use of a GPS/GNSS receiver on large bodies of water, at sea, or in the air.

1.5 A person who meets the requirements in this guide is only prepared to operate a GPS/GNSS receiver to determine his or her location, and collect position and movement information, in a wilderness environment.

1.6 This guide does not imply that a GPS/GNSS receiver is a replacement for a map and compass. Use of the latter is strongly recommended as a backup for GPS/GNSS navigation.

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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.8 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

¹ This guide is under the jurisdiction of ASTM Committee F32 on Search and Rescue and is the direct responsibility of Subcommittee F32.03 on Personnel, Training and Education.

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² This guide refers to GPS/GNSS, rather than GPS, receivers, due to the increasing number of global satellite navigation systems worldwide. Currently, only GPS and GLONASS are in operation and provide global satellite coverage. However, satellite navigation receivers are now manufactured which are capable of utilizing GPS, GLONASS, and Galileo satellites to determine a position on or above the earth's surface.

mentations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

2. Referenced Documents

2.1 *ASTM Standards:*³

F1633 *Guide for Techniques in Land Search* (Withdrawn 2017)⁴

F1773 *Terminology Relating to Climbing, Mountaineering, Search and Rescue Equipment and Practices*

F2209 *Guide for Training of Land Search Team Member*

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *Galileo*, *n*—a GNSS currently under development by the European Union.

3.1.2 *GLONASS (Globalnaya navigatsionnaya sputnik-ovaya sistema)*, *n*—the GNSS owned and operated by the Russian Aerospace Defense Forces.

3.1.3 *GNSS (Global Navigation Satellite System)*, *n*—a navigation system utilizing a constellation of dedicated satellites to determine a location on or above the earth's surface.

3.1.4 *GNSS receiver*, *n*—a radio receiver that uses satellite signals to fix its location on or above the earth's surface.

3.1.5 *GPS (Global Positioning System)*, *n*—the GNSS owned and operated by the United States government.

3.1.6 *map datum*, *n*—the set of values used to define a particular geodetic model used by a GPS/GNSS receiver to determine its location.

3.2 Definitions of terms not defined in this standard can be found in ASTM Guide F1633, Guide F1773, and Guide F2209.

4. Significance and Use

4.1 This guide establishes the minimum knowledge, skills, and abilities required to use a GPS/GNSS receiver to determine

³ 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.

⁴ The last approved version of this historical standard is referenced on www.astm.org.