

## Introduction

This proposal provides documentation needed to obtain FGDC recognition of the ISO 19157:2013 Geographic information -- Data quality standard. The recognition level sought for this standard will be FGDC Endorsement as described in the [FGDC Policy on Recognition of Non-Federally Authored Geographic Information Standards and Specifications \(November 2005\)](#).

The following information responds to the specific questions outlined per Section V.1 of the FGDC Policy and will be submitted to the FGDC Standards Working Group for consideration.

## Documentation

### **a. The category of the standard or specification (per Section III).**

International Organization for Standardization (ISO) published standards – standards developed through the ISO standards process.

### **b. The proposed level of FGDC recognition (per Section IV).**

Endorsement of ISO 19157:2013 Geographic information -- Data quality, with concurrent withdrawal of ISO/TS 19138:2006 Geographic information -- Data quality measures

### **c. A discussion of the applicability of the proposed standard or specification in Federal geospatial activities, including discussion of the conditions where it should be employed and anywhere it should not be, i.e., provide the scope of Federal geospatial applicability of the standard or specification.**

The ISO 19157:2013 Geographic information -- Data quality standard facilitates the description of the geographic data quality and a consistent approach to report on dataset quality information. As geographic data are increasingly being shared used beyond their intended purpose, providing information about data quality can help identify the best data for a particular application and to understand appropriate and inappropriate uses of the data.

Also, it defines the standardized components and structures of data quality measures and defines commonly used data quality measures. Many Federal agencies maintain and manage geospatial data and geographic information systems (GIS) and are required to develop metadata as outlined in [Executive Order 12906](#) and [OMB Circular A-16, revised \(2002\)](#) to support the National Spatial Data Infrastructure (NSDI). Data quality is an important component of data management to ensure data is valid and reliable and it applies across Federal agencies.

**d. The specific reason(s) that the standard or specification would be of value to the Federal government and, if applicable, to other members of the FGDC. These should include, but not be limited to, identification of the specific FGDC subcommittee(s) and/or working group(s) whose members support the submission of the standard or specification and how it benefits its/their responsibilities.**

The FGDC Metadata Working Group (MWG) supports the submission of the standard because it furthers the MWG's efforts to promote NSDI principles through the implementation of geospatial metadata and other related semantic and structural (e.g., non-geospatial) metadata standards established by Federal, National and International Standards organizations by promoting the documentation, discovery, and reuse of geospatial data resources and also defining a set of data quality measures for use in evaluating and reporting data quality. It is applicable to data producers providing quality information to describe and assess how well a data set conforms to its product specification and to data users attempting to determine whether or not specific geographic data are of sufficient quality for their particular application.

This standard is a revision of ISO/TS 19138:2006 Geographic information -- Data quality measures, ISO 19113:2002 Geographic information -- Quality principles, and ISO 19114:2003 Geographic information -- Quality evaluation procedures and includes many additional elements that add value to the standard being proposed for endorsement including:

- Establishes the principles for describing the quality of geographic data
- Defines components for describing data quality
- Specifies components and content structure of a register for data quality measures
- Describes general procedures for evaluating the quality of geographic data
- Establishes principles for reporting data quality
- Defines a set of data quality measures for use in evaluating and reporting data quality

In addition, supporting this standard helps facilitate Federal agencies requirement to meet OMB guidelines under the Data Quality Act<sup>1</sup>. Using this standard will enable users with the ability to determine whether the data in a holding will be of use to them and how to access the data. By establishing a common set of metadata terminology, definitions and extension procedures, this standard promotes the proper use and effective retrieval of geographic data.

---

<sup>1</sup> Office of Management and Budget Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies. February 22, 2002.  
<https://www.whitehouse.gov/sites/default/files/omb/fedreg/reproducible2.pdf>

**e. Any restrictions, limitations, or other constraints that may affect promulgation and/or adoption and/or implementation of the standard or specification, e.g., copyright, license fees, restriction of applicability to a specific technology, and the like. The FGDC staff will negotiate with standards organizations to make an attempt to acquire free standards documents for FGDC members.**

ISO and ANSI standards are copyrighted. Standards are works of authorship and, under U.S. and international law, are copyright protected to give the owner rights of control and remuneration that cannot be taken away without just compensation.

ISO standards incur a cost that varies with each standard and in this case is \$265 US dollars. However, through the US standards process, the American National Standards Institute (ANSI) offers INCITS/ISO 19157:2013[2014] (identical U.S. adoption of INCITS/ISO 19157:2013) for \$133 US dollars - visit <http://webstore.ansi.org/RecordDetail.aspx?sku=INCITS%2fISO+19157%3a2013%5b2014%5d> to purchase.<sup>2</sup>

**f. The name and business addresses of a point-of-contact (POC) in the proposing or sponsoring FGDC member agency and, if applicable, the name and business addresses of a POC in the proposing non-Federal body.**

Jennifer Carlino  
FGDC Metadata Coordinator  
Chair, Metadata Working Group  
Federal Geographic Data Committee  
Core Science Systems  
U.S. Geological Survey  
U.S. Department of the Interior  
Phone: 303-202-4260  
[www.fgdc.gov](http://www.fgdc.gov)

---

<sup>2</sup> To learn why ANSI charges for standards, visit [https://www.ansi.org/help/charge\\_standards.aspx?menuid=15](https://www.ansi.org/help/charge_standards.aspx?menuid=15).

**g. Identification and/or explanation of the process by which the proposed standard or specification was developed and reviewed. This information will support FGDC determination as to whether the process meets the criteria for a voluntary consensus standards process as defined in OMB Circular A-119. When accredited standards development bodies such as ISO, ANSI/INCITS, and NIST are the authors only their identity need be supplied. Otherwise, a description of the development and review process and a list of participants must be included.**

ISO 19115-1:2014 Geographic information -- Metadata -- Part 1: Fundamentals standard was developed through the ISO standards process.

DRAFT