

WLIA Standard

Content Standard for Geospatial Metadata

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Frontispiece

The Wisconsin Land Information Association Board Metadata Task Force developed this standard. The WLIA Metadata Task Force investigates Metadata issues and recommends Metadata policies and procedures.

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Metadata Standard

The Task Force has completed its examination of Metadata standards. The Task Force recommends adoption of a WLIA Notification-type Standard referring to the Federal Geographic Data Committee's Metadata Standard (FGDC-STD-001-1998).

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1. Purpose

The purpose of this Wisconsin Land Information Association (WLIA) Standard is to clearly identify a geospatial metadata content standard for use in support of geographic and land information system (GIS) development in Wisconsin.

2. Background

In 1994, the Metadata Task Force was formed to examine issues related to metadata. The Task Force worked to educate the WLIA membership on the value of metadata and assisted the State Cartographer's Office and the Wisconsin Land Information Board with their Federal Geographic Data Committee (FGDC) grant project to establish a clearinghouse of Wisconsin Metadata.

In recent years, the Task Force has continued to educate GIS users about the utility of metadata and held periodic discussions about an appropriate content standard. The Task Force explored the FGDC Content Standard for Geospatial Metadata (FGDC Metadata Standard) in detail. There were discussions whether there should be a "Wisconsin Subset" of the FGDC Metadata Standards or if the federal standard should be adopted as-is. The complexity of the federal standard, (relatively) clumsy authoring tools, and a pragmatic focus on metadata as a tool to assist in data sharing drove the consideration of a state subset. After much examination, increasing use of the FGDC Metadata Standard by agencies and software manufacturers, and more widespread knowledge of the benefits of metadata beyond data sharing, it became obvious that endorsement of the FGDC standard was the logical recommendation of the Task Force.

3. Definitions

The following terms are used throughout this standard.

3.1. Metadata

"Simply defined, metadata is 'data about data.' Used in the context of digital spatial data, metadata is the background information, which describes the content, quality, condition, and other appropriate characteristics of the data. Paper maps contain metadata, primarily as part of the map legend. In this form, metadata is readily apparent and easily transferred between map producers and map users. When map data are in a digital form, metadata is equally as important, but its development and maintenance often require a more conscious

effort on the part of data producers and the chain of subsequent users who may modify the data to suit their particular needs." (National States Geographic Information Council Metadata Primer -- A "How To" Guide on Metadata Implementation, section 1.1. Authors: David Hart & Hugh Phillips. Version: June 10, 1998. URL: <http://www.lic.wisc.edu/metadata/metaprim.htm>)

3.2. Geospatial Data

Geospatial data is "information that identifies the geographic location and characteristics of natural or constructed features and boundaries on the earth. This information may be derived from, among other things, remote sensing, mapping, and surveying technologies." (Content Standard for Digital Geospatial Metadata, FGDC-STD-001-1998, Appendix A: Glossary. Authors: Metadata Ad Hoc Working Group, Federal Geographic Data Committee. Version: June 1998. URL: <http://www.fgdc.gov/metadata/csdgm/glossary.html>)

4. Scope and Type of Standard

This standard is intended to promote the use of the Federal Geographic Data Committee's Content Standard for Digital Geospatial Metadata (FGDC Metadata Standard) among Wisconsin's developers of geospatial data. The FGDC Metadata Standard was developed for use by any agency developing geospatial data. In fact, the "FGDC invites and encourages organizations and persons from State, local, and tribal governments, the private sector, and non-profit organizations to use the standard to document their geospatial data. A major difficulty in the geospatial data community is the lack of information that helps prospective users to determine what data exist, the fitness of existing data for planned applications, and the conditions for accessing existing data, and to transfer data to a user's system. This standard, developed with aid of broad public participation, will help to ease these problems and to develop the National Spatial Data Infrastructure." (Ibid. Introduction, section 3: Applicability. URL: <http://www.fgdc.gov/metadata/csdgm/introduction.html>)

The WLIA Standard "Guideline for Standard Development" (WLIA Standard 1992-1, 6-98 Revision) identifies three types of WLIA Standards. The first type, "WLIA Standards", refers to "prescribed methods, procedures, formats, or specifications," related to Geographic and Land Information Systems. They are identified as "fundamental ingredients" of a successful GIS/LIS. WLIA Standards are developed under the guidance of the WLIA Technical Committee and Task Forces. The second types, "WLIA Guidelines", are related to "procedures, data, or organizational specifications." They are meant to support system development and decision-making. WLIA and other organizations jointly develop WLIA Guidelines. The third types, "Notifications of Other Standards and

References”, are standards developed independently of WLIA and shared with or made accessible to the membership. This standard is of the third type.

As a Notification-type Standard, this document does not include the text of the FGDC Metadata Standard. See Sections 5.5, 5.6, and 6 for information on obtaining a copy of the FGDC Metadata Standard. Although the WLIA Metadata Task Force did not develop the FGDC Metadata Standard, the FGDC Metadata Standard is a prescriptive specification that represents a "fundamental ingredient" for a successful GIS. Furthermore, the FGDC Metadata Standard is already in widespread use and has a growing list of agencies that have adopted it as a standard. It might be said that use of the FGDC Metadata Standard is becoming a generally accepted or customary practice.

5. Wisconsin Metadata Standard

Wisconsin producers of geospatial data should create and maintain metadata that is compliant with the FGDC Metadata Standard.

5.1. Uses of Metadata

For the purposes of cataloging and documenting an agency's geospatial data, metadata should be maintained. Metadata is useful for managing libraries of data for internal use as well as for sharing with a community of users, through a clearinghouse, or other catalog. Metadata is also useful for understanding issues associated with the transfer or translation of geospatial data between agencies, data models, or software platforms. Developing and maintaining metadata protects an organization's internal investment in geospatial data.

5.2. Roles of Metadata

The FGDC Metadata Standard identifies four roles that metadata play. (Ibid. Introduction, section 1: Objectives)

5.2.1. Availability

Metadata are used to determine what data exist for a particular geographic location.

5.2.2. Fitness for use

Metadata are used to evaluate whether a particular set of geospatial data meets an identified need.

5.2.3. Access

Metadata are used to facilitate the acquisition of an identified set of geospatial data.

5.2.4. Transfer

Metadata are used to help process and use a set of geospatial data.

5.3. Specifics of the FGDC Metadata Standard

Rather than incorporate the text of the FGDC Metadata Standard into this document, it is included by reference. This section addresses the availability of the content standard and its evolution.

5.4. Bibliographic Reference

Federal Geographic Data Committee. FGDC-STD-001-1998. Content standard for digital geospatial metadata (revised June 1998). Federal Geographic Data Committee. Washington, D.C.

5.5. World Wide Web Availability

The FGDC Metadata Standard is available on the World Wide Web at this location:

<http://www.fgdc.gov/metadata/csdgm/>

5.6. Changes to the FGDC Metadata Standard

"The current maintenance authority for the standard is the FGDC Secretariat. The Federal Geographic Data Committee is the approving authority for the standard. Questions concerning the standard are to be addressed to the FGDC Secretariat, in care of the U.S. Geological Survey, 590 National Center, Reston, Virginia 20192. Copies of this publication are available from the Federal Geographic Data Committee. Secretariat, in care of the U.S. Geological Survey, 590 National Center, Reston, Virginia 20192; telephone (703) 648-5514; facsimile (703) 648-5755; Internet (electronic mail) gdc@usgs.gov. The text also is available from anonymous File Transfer Protocol (anonymous ftp) server

fgdc.er.usgs.gov and at the FGDC web site <http://www.fgdc.gov/metadata>." (Ibid. Introduction, section 6: Maintenance Authority)

The FGDC Metadata Standard may evolve in the future due to identified needs from its users or due to actions by standards bodies such as the American National Standards Institute (ANSI) or the International Organization for Standardization (ISO). The ISO is developing an international content standard for metadata based on the 1994 version of the FGDC Metadata Standard.

In the event of a revision to the FGDC Metadata Standard, the WLIA Technical Committee may elect to reconsider the adoption of the FGDC standard as a WLIA standard. If the WLIA Technical Committee takes no action, this WLIA standard refers to the most current version of the FGDC Metadata Standard.

6. Implementation

Many of the software tools used to develop and process geospatial data feature metadata components. Increasingly, these metadata components produce FGDC compliant geospatial metadata. In addition to these embedded functions, there are other freely available tools and resources for the agency wishing to implement the FGDC Metadata Standard. WLIA maintains a list of World Wide Web pages related to metadata implementation at this address:

<http://www.wlia.org/links.html>