

[Skip to content](#) [Skip to navigation](#)

- [Site Map](#)
- [Accessibility](#)
- [Contact](#)

Search Site

[Advanced Search...](#)



Sections

<a href="#">Home</a>	<a href="#">Library</a>	<a href="#">Calendar</a>	<a href="#">Forums</a>	<a href="#">Contact Us</a>
----------------------	-------------------------	--------------------------	------------------------	----------------------------

Personal tools

[Log in](#) [Join](#)

You are here: [Home](#) → [Metadata](#) → Geospatial Metadata Standards

Document Actions

- [!\[\]\(896151ec231b70900e969d67696ca48d\_img.jpg\)](#)
- [!\[\]\(a852c5461f8be0331350e2cc706daa68\_img.jpg\)](#)

Geospatial Metadata Standards

- [Why use a standard?](#)
- [What standard should be used?](#)

- [What are profiles and extensions?](#)
- [What is the ISO metadata standard?](#)
- [How can I prepare my metadata for transition to ISO?](#)

## Why use a standard?

The more standardized the structure and content of information, the more effectively it can be used by both humans and machines. A metadata standard is simply a common set of terms and definitions that are presented in a structured format.

## What standard should be used?

The Content Standard for Digital Geospatial Metadata (CSDGM), Vers. 2 ([FGDC-STD-001-1998](#)) is the US Federal Metadata standard. The Federal Geographic Data Committee originally adopted the CSDGM in 1994 and revised it in 1998. According to Executive Order 12096 all Federal agencies are ordered to use this standard to document geospatial data created as of January, 1995. The standard is often referred to as the FGDC Metadata Standard and has been implemented beyond the federal level with State and local governments adopting the metadata standard as well.

CSDGM resources:

- [CSDGM Workbook](#) - The CSDGM Workbook is a user-friendly view of the standard that includes background on the development of the standard, explanations of special format requirements, example values, FAQs, and sample metadata. This workbook is highly recommended for use in all introductory metadata training and as a desktop reference guide.
- [CSDGM Graphical Representation](#) - This set of color-

coded diagrams developed by Susan Stitt of the USGS Biological Resources Division provides a graphical representation of each section of the CSDGM, the elements contained within the section and the conditionality of the elements.

- [CSDGM Document Type Declaration](#) - An XML Document Type Definition (DTD) file developed by Peter N. Schweitzer (U.S. Geological Survey) for validating XML-encoded metadata against the FGDC's core standard.
- CSGDM [XML Schema Document representation](#) and [Zipfile](#) developed by the [NOAA Coastal Services Center](#) for validating XML-encoded metadata against the FGDC's core standard.
- [CSDGM Standard](#) - This is the official technical specification of the CSDGM Standard. This document is recommended for those familiar with the nomenclature of standards technical documentation and those developing metadata creation and publication software applications.
- [CSDGM HTML Version](#) - The CSDGM Standard technical specification expressed as HTML

### **What are Profiles and Extensions?**

A key feature of the CSDGM Version 2 is the ability of geospatial data communities to customize the base CSDGM. Extensions are a set of added elements that extend the

Participants	>
Data & Services	>
Standards	>
Metadata	>
Framework	>
Policy & Planning	
Training	
Grants	
International	
Geospatial LoB	
NGAC	

standard to better serve the community or data type. Profiles are custom adaptations of the standard that may specify specific domain values for existing CSDGM elements and/or increase conditionality of a specific element. Profiles may also include extensions.

FGDC Endorsed **Extensions** to the CSDGM Version 2 (FGDC-STD-001-1998):

- [Content Standard for Digital Geospatial Metadata: Extensions for Remote Sensing Metadata](#) - Extended elements to support the documentation of geospatial data directly obtained from remote sensing. This extension includes elements that describe the remote sensing platform and sensors. This extension is intended for the documentation of data collected directly from the sensor. It is not intended for the documentation of data derived from remotely sensed data such as classified imagery. The core CSDGM standard should be used to document derived data.

FGDC Endorsed **Profiles** of the CSDGM Version 2 (FGDC-STD-001-1998):

- [Biological Data Profile of the Content Standard for Digital Geospatial Metadata](#) - The profile broadens the application of the CSDGM so that it is more easily applied to data that are not explicitly geographic (laboratory results, field notes, specimen collections, research reports) but can be associated with a geographic location. The profile changes the conditionality and domains of CSDGM elements, requires the use of a specified taxonomical vocabulary,

and adds elements.

- [Metadata Profile for Shoreline Data](#) - The profile addresses variability in the definition and mapping of shorelines by providing a standardized set of terms and data elements required to support metadata for shoreline and coastal data sets. The profile also includes a glossary and bibliography.

**What is the ISO metadata standard?**

The international community, through the International Organization of Standards (ISO), has developed and approved an international metadata standard, ISO 19115. As a member of ISO, the US required to revise the CSDGM in accord with ISO 19115. Each nation can craft their own profile of ISO 19115 with the requirement that it include the 13 core element. The FGDC is currently leading the development of a US Profile of the (ISO) international metadata standard, ISO 19115.

ISO 19115 Core Metadata Elements	
Mandatory Elements:	Conditional Elements:
Dataset title	Dataset responsible party
Dataset reference date	Geographic location by coordinates
Dataset language	Dataset character set
Dataset topic category	Spatial resolution
Abstract	Distribution format
Metadata point of contact	Spatial representation type
Metadata date stamp	Reference system
	Lineage statement
	On-line Resource
	Metadata file identifier
	Metadata standard name
	Metadata standard version
	Metadata language
	Metadata character set

US Implementation of ISO metadata standards resources:

- [North American Profile Development for ISO](#) – NSDI Training Program lesson, March 2008

- [Draft North American Profile - Open for Review](#)  
[Comments](#) - February 1 - March 16, 2007
- [Status of US Implementation of ISO Metadata](#) June 2006 [PowerPoint]
- [CSDGM2ISO](#) - CSDGM to ISO 19115 Element Crosswalk developed by Intergraph as part of the [NSDI Cooperative Grants Program](#)
- [US National Profile Development Activities](#) - October 2005 [PowerPoint 660 KB]

## How can I prepare my metadata for transition to ISO?

### **Include ISO Dataset Topic Categories as CSDGM Theme\_Keywords**

Most of the ISO Core Metadata Elements listed above either map to existing CSDGM metadata elements or represent properties of the data that can be determined and populated using a data integrated metadata tool. Dataset topic category is the only mandatory element of the ISO core metadata set that requires new information that cannot be directly captured from the data.

This set of 19 high-level subject categories is provided within the ISO 19115 standard as a means of quickly sorting and accessing thematic information. To aid in the transition to ISO metadata, you are encouraged to include one or more of the Dataset topic category terms, as presented below (funny truncation and capitalization and all), as Theme\_Keywords within your current CSDGM metadata. More guidance about the use of Dataset Topic Category as CSDGM Theme\_Keywords is provided in the [Metadata Quick Guide](#) (see Theme\_Keywords).

### **ISO 19115 Topic Categories**

farming biota boundaries climatologyMeteorologyAtmosphere economy elevation environment geoscientificInformation health imageryBaseMapsEarthCover	intelligenceMilitary inlandWaters location oceans planningCadastre society structure transportation utilitiesCommunication
--	--

[Accessibility](#) | [FOIA](#) | [Privacy](#) | [Policies and Notices](#) | [Credits](#) | [Provide Feedback](#)

URL:<http://www.fgdc.gov/metadata/geospatial-metadata-standards>

Last modified on April 21, 2008 10:48

