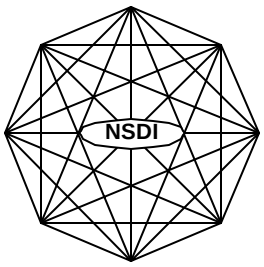


National Spatial Data Infrastructure

Content Standard for Digital Geospatial Metadata Workbook

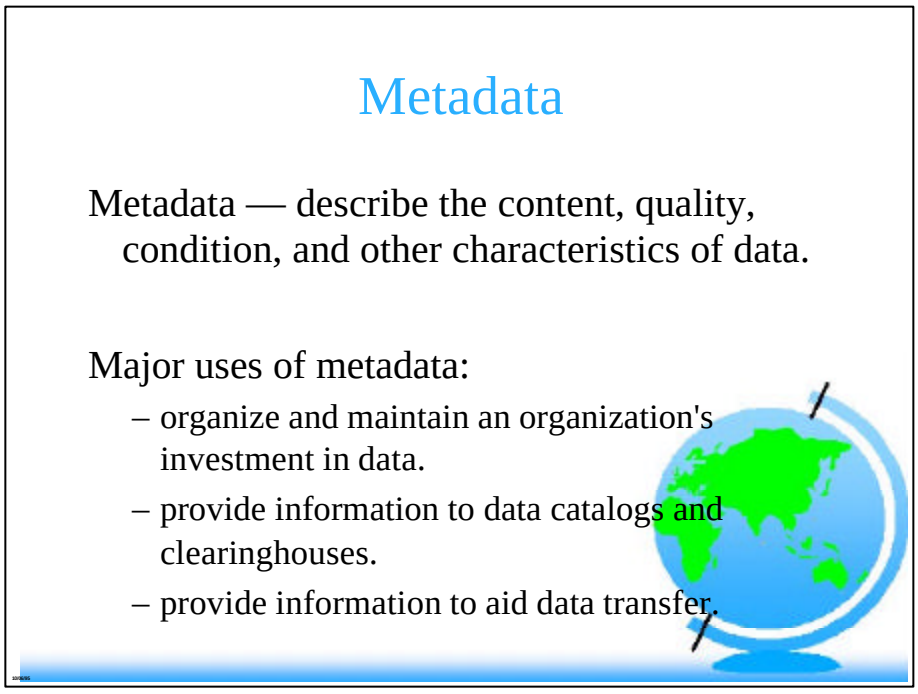
(For use with FGDC-STD-001-1998)

Version 2.0

Federal Geographic Data Committee

May 1, 2000

Federal Geographic Data Committee
Department of Agriculture • Department of Commerce • Department of Defense • Department of Energy
Department of Health & Human Services • Department of Housing and Urban Development
Department of the Interior • Department of Justice • Department of State
Department of Transportation • Environmental Protection Agency
Federal Emergency Management Agency • Library of Congress
National Aeronautics and Space Administration • National Archives and Records Administration
National Science Foundation • Tennessee Valley Authority



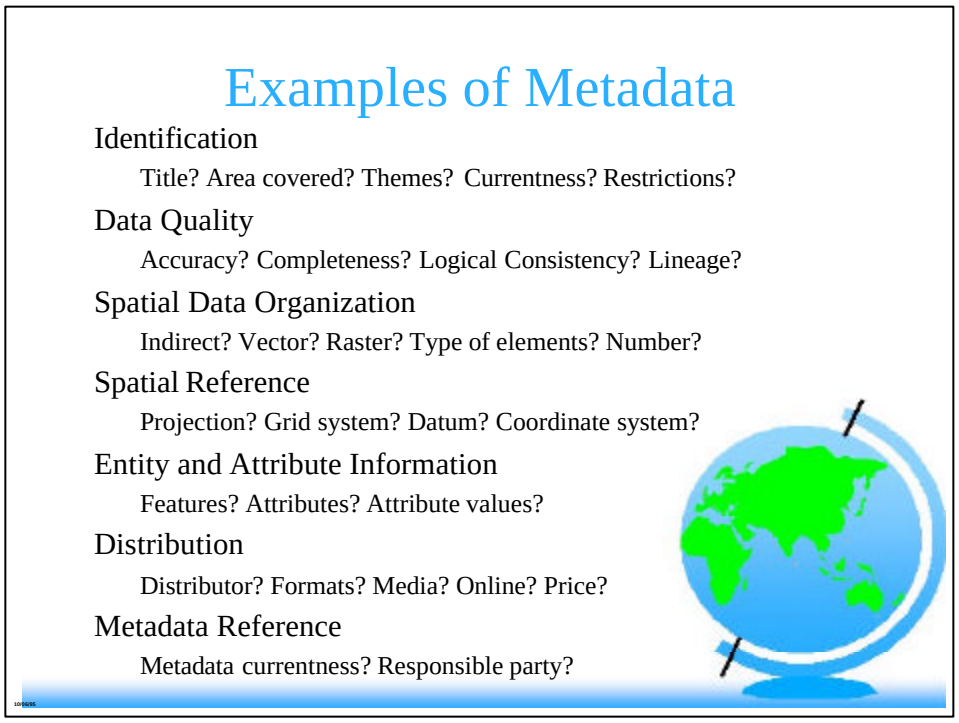
Definition: Metadata are "data about data" They describe the content, quality, condition, and other characteristics of data. Metadata help a person to locate and understand data.

Major uses of metadata:

Organize and maintain and organization's investment in data. Metadata help insure an organization's investment in data. As personnel change or time passes, information about an organization's data will be lost and the data may lose their value. Later workers may have little understanding of the content and uses for a digital data base and may find that they can't trust results generated from these data. Complete metadata descriptions of the content and accuracy of a geospatial data set will encourage appropriate use of the data. Such descriptions also may provide some protection for the producing organization if conflicts arise over the misuse of data.

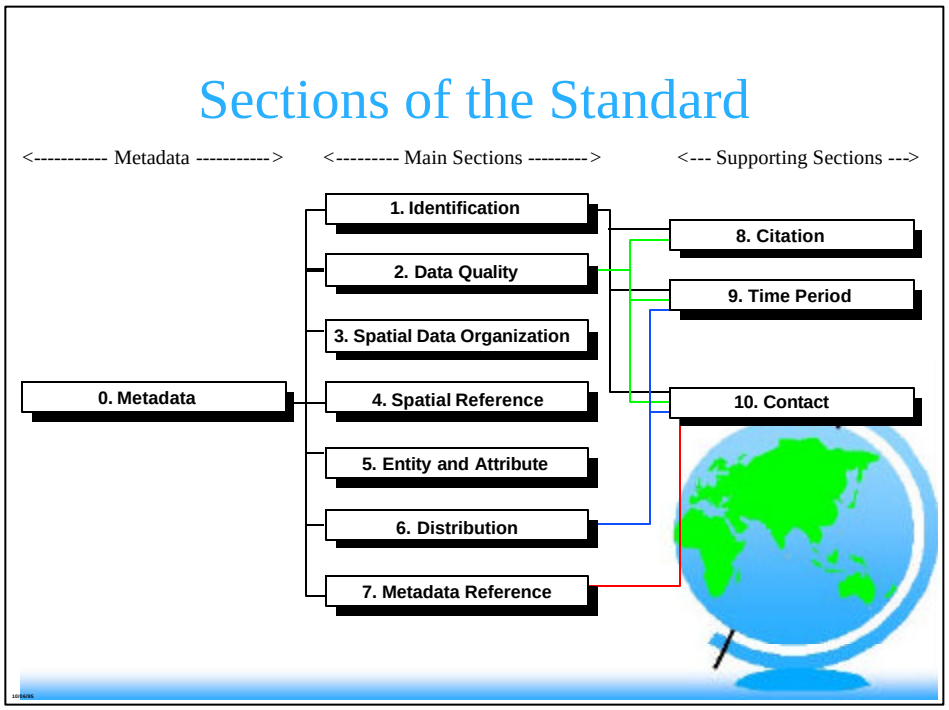
Provide information to data catalogs and clearinghouses. Applications of geographic information systems often require many themes of data. Few organizations can afford to create all data they need. Often data created by an organization also may be useful to others. By making metadata available through data catalogs and clearinghouses, organizations can find data to use, partners to share data collection and maintenance efforts, and customers for their data. The FGDC is sponsoring the development of the National Geospatial Data Clearinghouse through which data producers can provide metadata to others using the Internet.

Provide information to aid data transfer. Metadata should accompany the transfer of a data set. The metadata will aid the organization receiving the data process and interpret data, incorporate data into its holdings, and update internal catalogs describing its data holdings.



Metadata describe different aspect of data, including:

Identification -- What is the name of the data set? Who developed the data set? What geographic area does it cover? What themes of information does it include? How current are the data? Are there restrictions on accessing or using the data?
Data Quality -- How good are the data? Is information available that allows a user to decide if the data are suitable for his or her purpose? What is the positional and attribute accuracy? Are the data complete? Were the consistency of the data verified? What data were used to create the data set, and what processes were applied to these sources?
Spatial Data Organization -- What spatial data model was used to encode the spatial data? How many spatial objects are there? Are methods other than coordinates, such as street addresses, used to encode locations?
Spatial Reference -- Are coordinate locations encoded using longitude and latitude? Is a map projection or grid system, such as the State Plane Coordinate System, used? What horizontal and vertical datums are used? What parameters should be used to convert the data to another coordinate system?
Entity and Attribute Information -- What geographic information (roads, houses, elevation, temperature, etc.) is included? How is this information encoded? Were codes used? What do the codes mean?
Distribution -- From whom can I obtain the data? What formats are available? What media are available? Are the data available online? What is the price of the data?
Metadata Reference -- When were the metadata compiled? By whom?



The standard has 11 sections numbered 0 through 10.

Section 0, "Metadata," provides the starting point. It is composed of the main sections of the standard.

Sections 1 through 7 are the main sections of the standard.

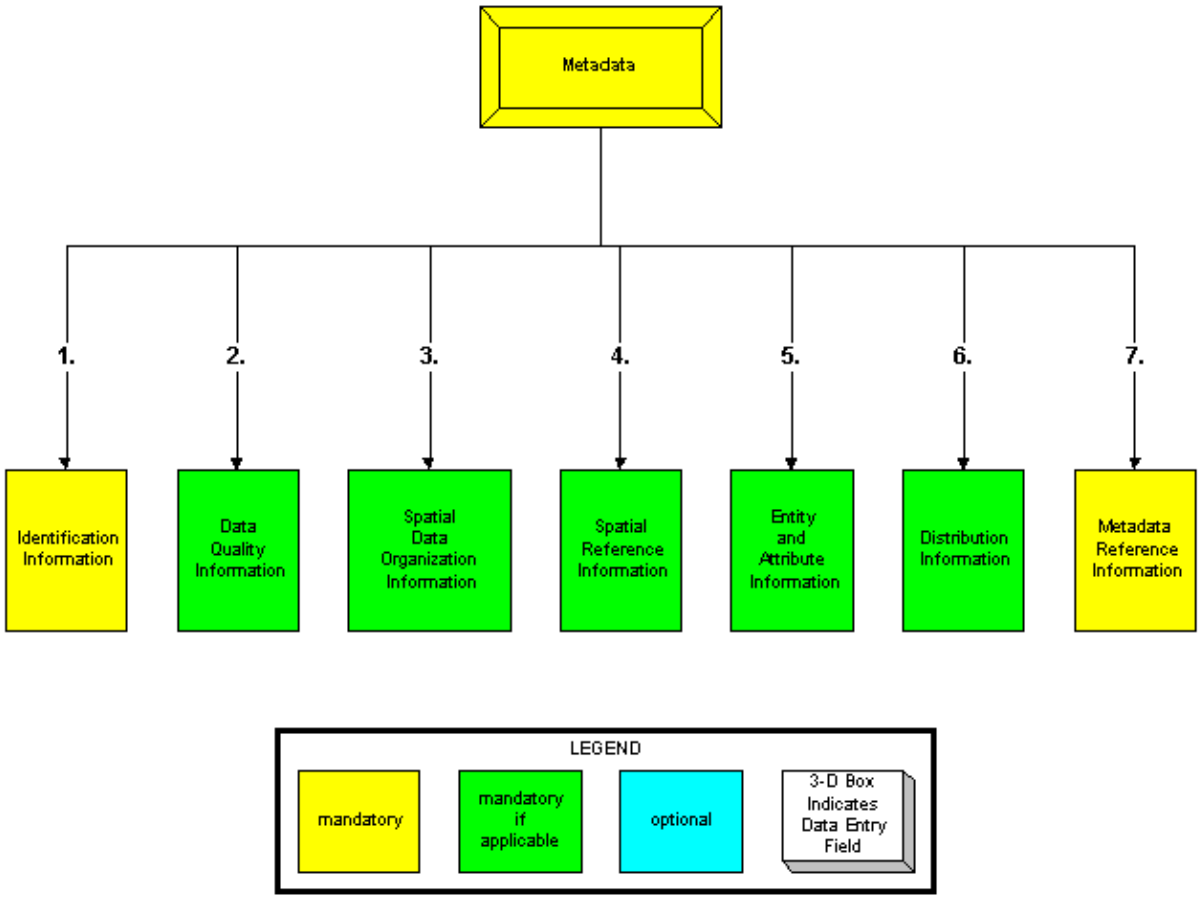
Sections 8 through 10 support other sections. They provide a common method to define citation, temporal, and contact information. These sections are never used alone.

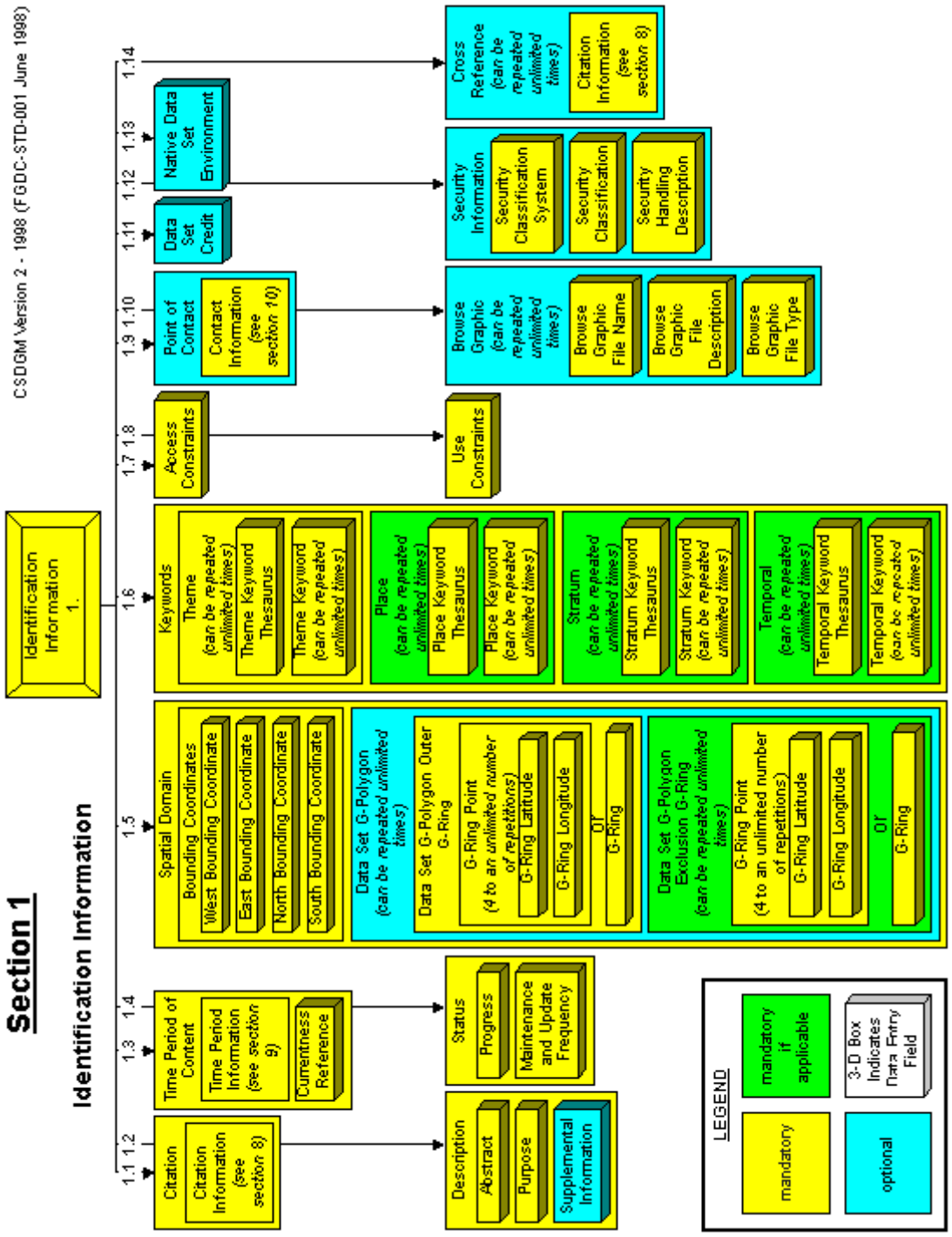
Graphical Representation of:
The Federal Geographic Data Committee's
Content Standards for Digital Geospatial Metadata

FGDC-STD-001-1998
June 1998 Version

Prepared by Susan Stitt
Technology Transfer Center
National Biological Information Infrastructure

In Conjunction with the FGDC Standards Working Group

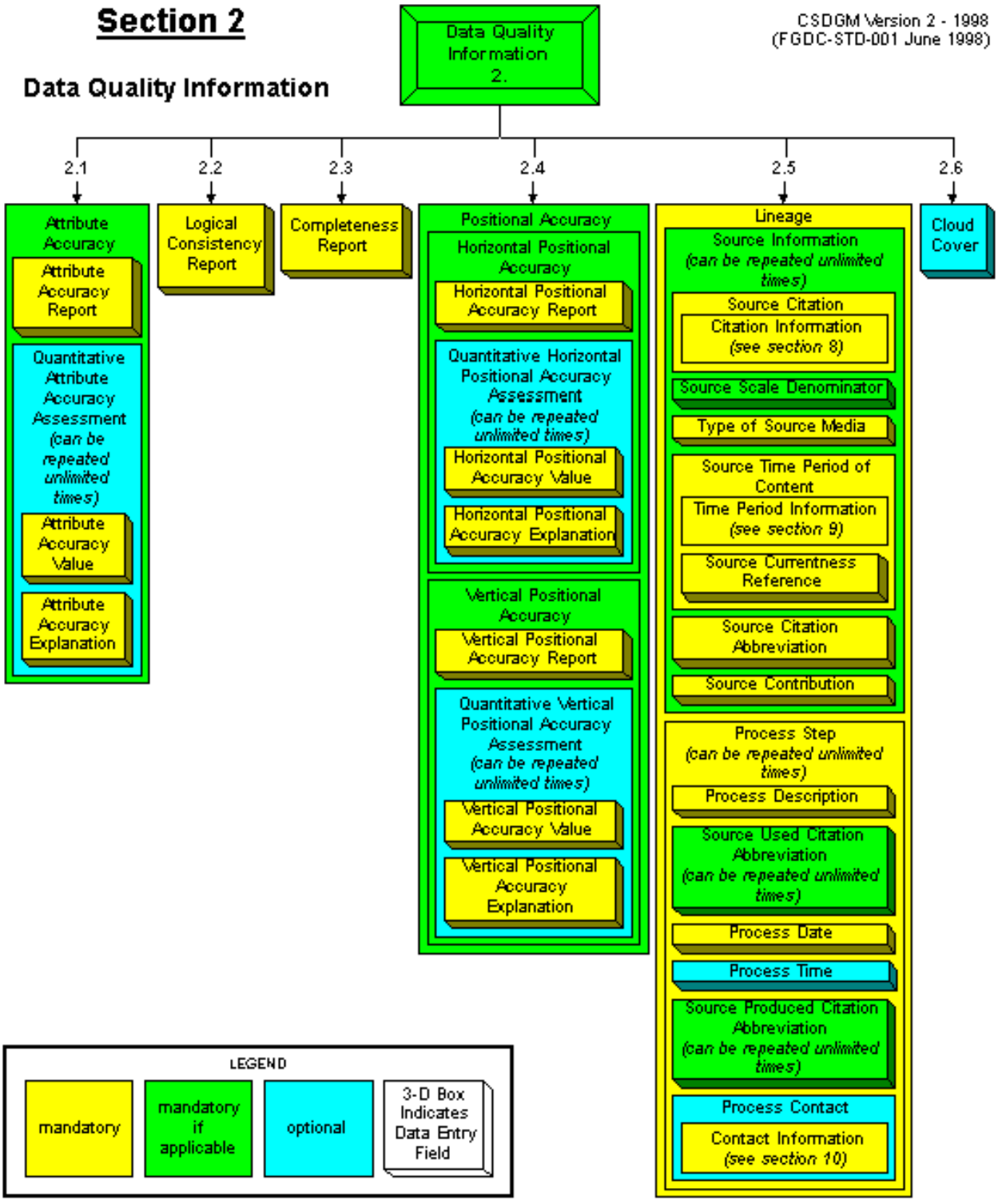


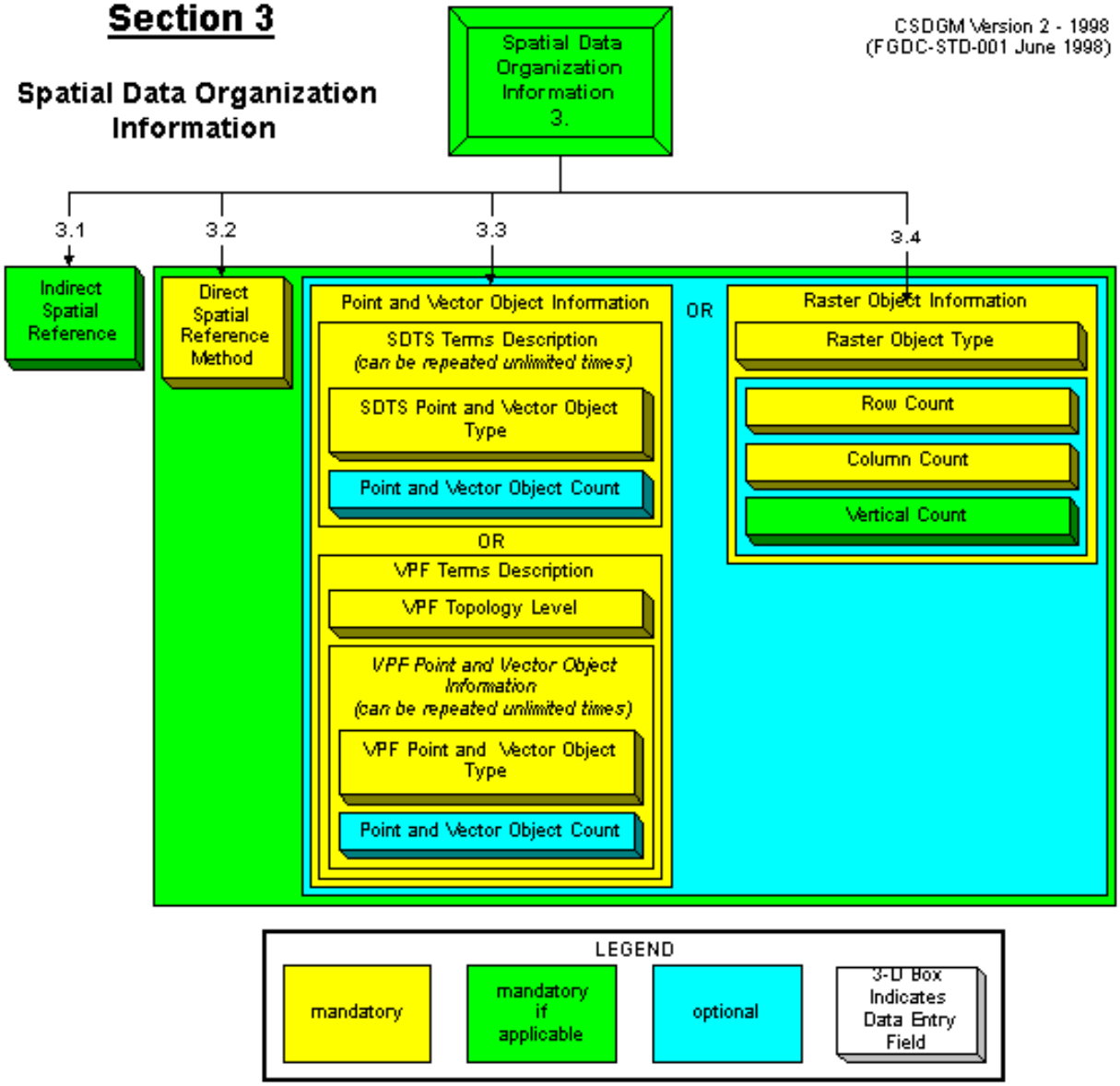

Section 1
Identification Information
CSDGM Version 2 - 1998 (FGDC-STD-001 June 1998)
Identification Information 1.
1.1 Citation
Citation Information (see section 8)
1.2 Description
Abstract
Purpose
Supplemental Information
1.3 Time Period of Content
Time Period Information (see section 9)
1.4 Currentness Reference
Status
Progress
Maintenance and Update Frequency
1.5 Spatial Domain
Bounding Coordinates
West Bounding Coordinate
East Bounding Coordinate
North Bounding Coordinate
South Bounding Coordinate
Data Set G-Polygon (can be repeated unlimited times)
Data Set G-Polygon Outer G-Ring
G-Ring Point (4 to an unlimited number of repetitions)
G-Ring Latitude
G-Ring Longitude
Or
G-Ring
Data Set G-Polygon Exclusion G-Ring (can be repeated unlimited times)
G-Ring Point (4 to an unlimited number of repetitions)
G-Ring Latitude
G-Ring Longitude
Or
G-Ring
1.6 Keywords
Theme (can be repeated unlimited times)
Theme Keyword Thesaurus
Theme Keyword (can be repeated unlimited times)
Place (can be repeated unlimited times)
Place Keyword Thesaurus
Place Keyword (can be repeated unlimited times)
Stratum (can be repeated unlimited times)
Stratum Keyword Thesaurus
Stratum Keyword (can be repeated unlimited times)
Temporal (can be repeated unlimited times)
Temporal Keyword Thesaurus
Temporal Keyword (can be repeated unlimited times)
1.7 Access Constraints
1.8 Use Constraints
1.9 Point of Contact
Contact Information (see section 10)
1.10 Browse Graphic (can be repeated unlimited times)
Browse Graphic File Name
Browse Graphic File Description
Browse Graphic File Type
1.11 Data Set Credit
1.12 Security Information
Security Classification System
Security Classification
Security Handling Description
1.13 Native Data Set Environment
1.14 Cross Reference (can be repeated unlimited times)
Citation Information (see section 8)
LEGEND
mandatory
mandatory if applicable
optional
3-D Box Indicates Data Entry Field

Section 2

Data Quality Information

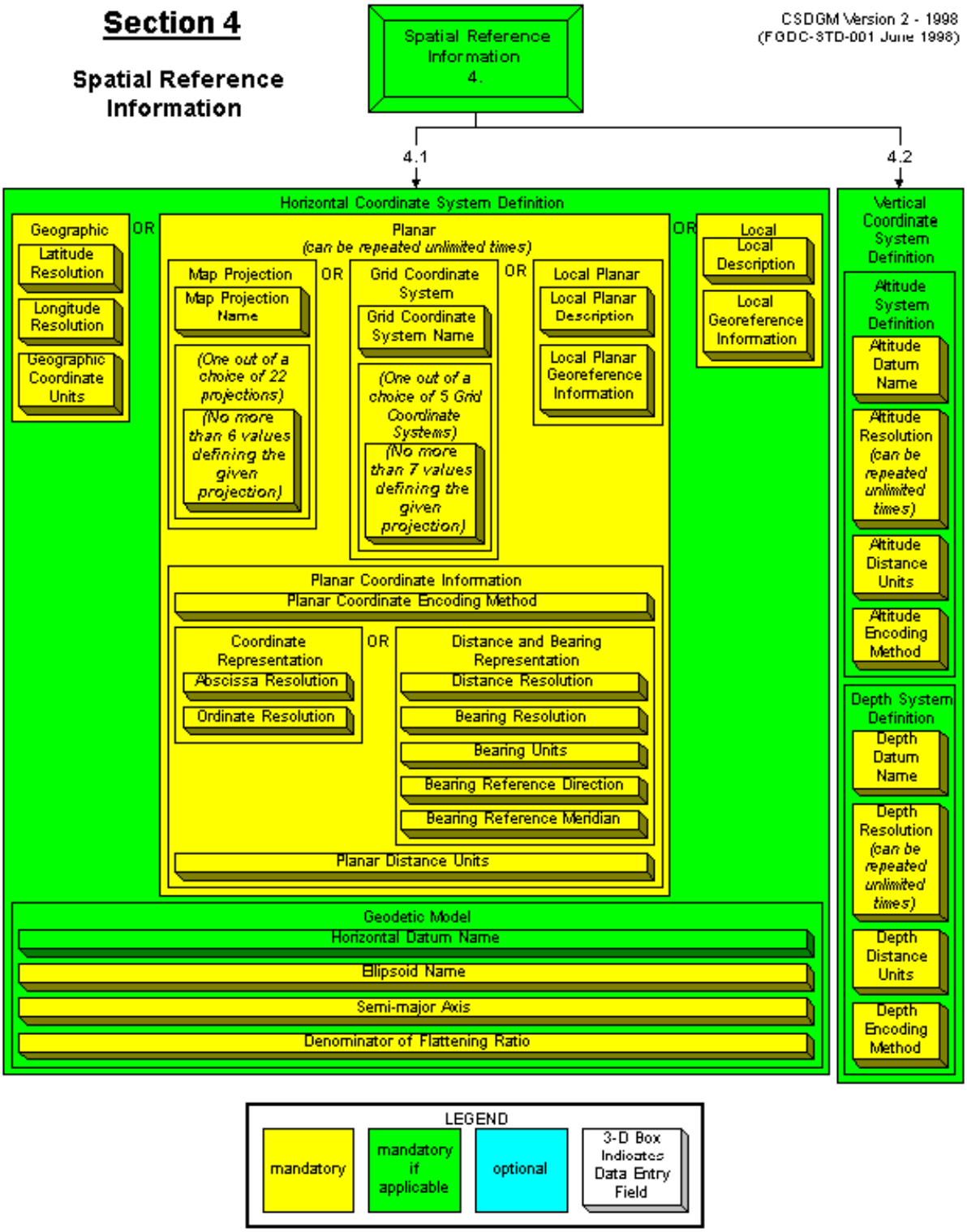
CSDGM Version 2 - 1998
(FGDC-STD-001 June 1998)

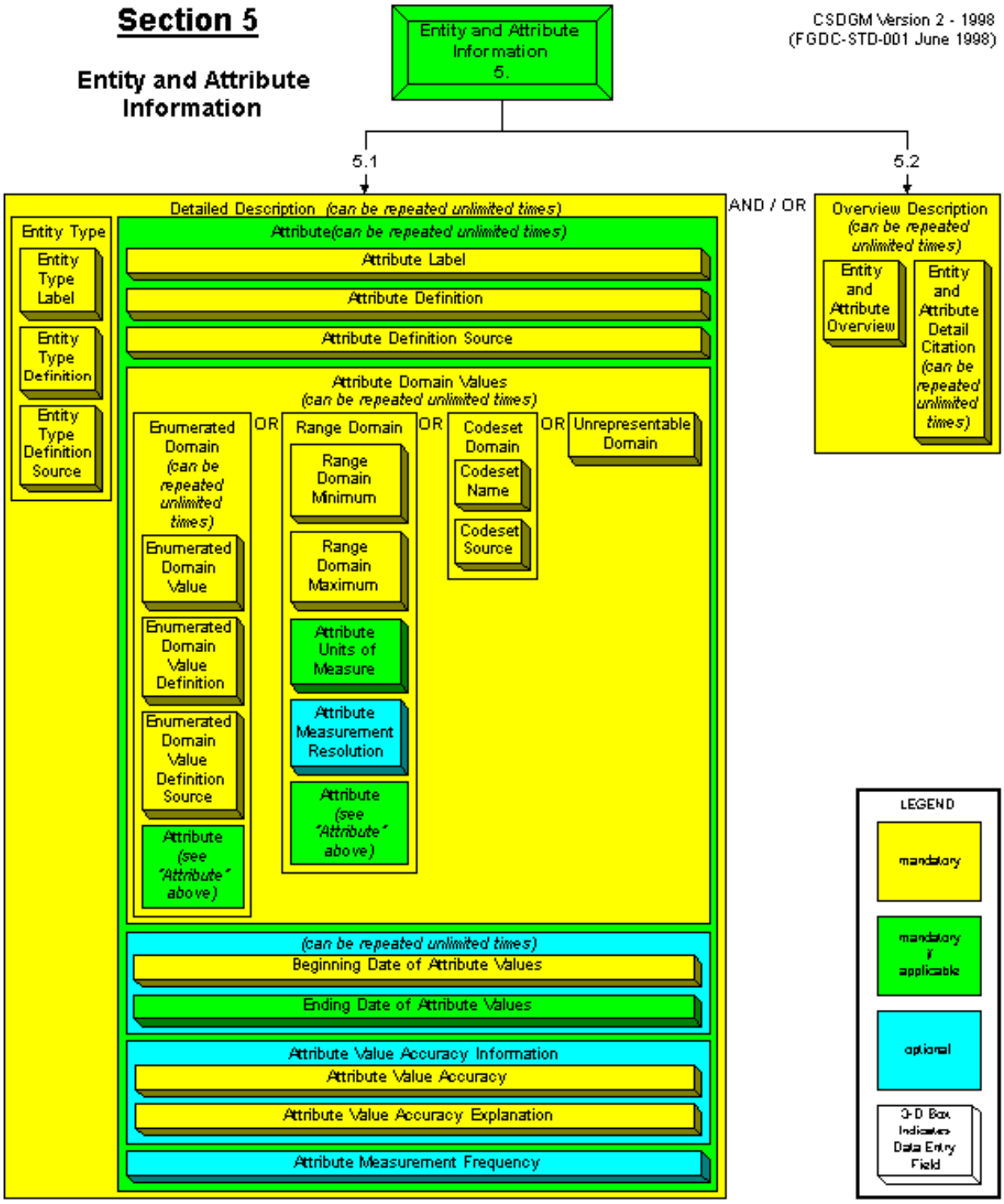


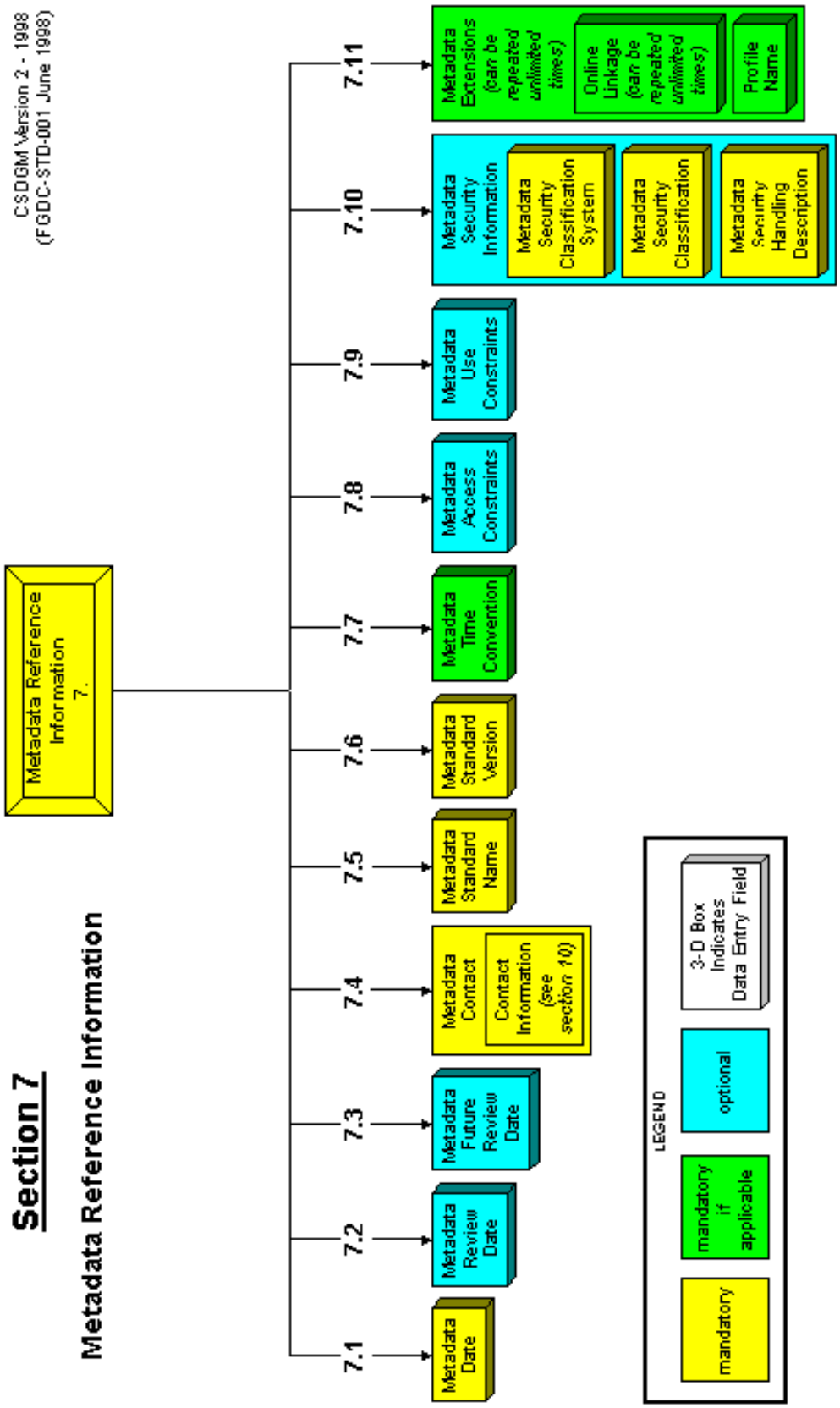

Section 3
Spatial Data Organization Information
Spatial Data Organization Information 3.
CSDGM Version 2 - 1998
(FGDC-STD-001 June 1998)
3.1
3.2
3.3
3.4
Indirect Spatial Reference
Direct Spatial Reference Method
Point and Vector Object Information
SDTS Terms Description
(can be repeated unlimited times)
SDTS Point and Vector Object Type
Point and Vector Object Count
OR
VPF Terms Description
VPF Topology Level
VPF Point and Vector Object Information
(can be repeated unlimited times)
VPF Point and Vector Object Type
Point and Vector Object Count
OR
Raster Object Information
Raster Object Type
Row Count
Column Count
Vertical Count
LEGEND
mandatory
mandatory if applicable
optional
3-D Box Indicates Data Entry Field

Section 4

Spatial Reference Information

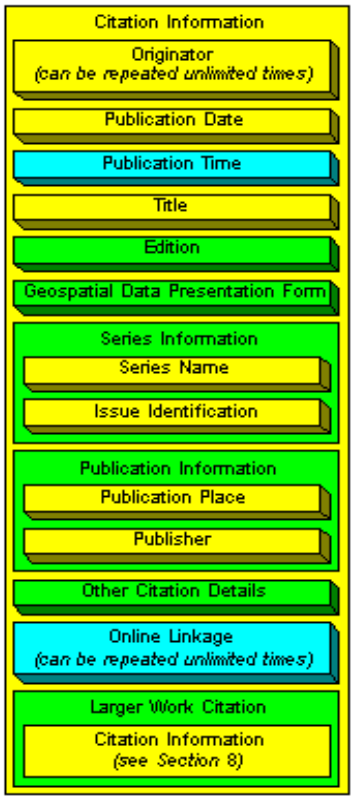



Section 5
Entity and Attribute Information
CSDGM Version 2 - 1998
(FGDC-STD-001 June 1998)
Entity and Attribute Information
5.
5.1
5.2
Detailed Description (can be repeated unlimited times)
AND / OR
Overview Description (can be repeated unlimited times)
Entity and Attribute Overview
Entity and Attribute Detail Citation (can be repeated unlimited times)
Entity Type
Entity Type Label
Entity Type Definition
Entity Type Definition Source
Attribute(can be repeated unlimited times)
Attribute Label
Attribute Definition
Attribute Definition Source
Attribute Domain Values (can be repeated unlimited times)
Enumerated Domain (can be repeated unlimited times)
Enumerated Domain Value
Enumerated Domain Value Definition
Enumerated Domain Value Definition Source
Attribute (see "Attribute" above)
OR
Range Domain
Range Domain Minimum
Range Domain Maximum
Attribute Units of Measure
Attribute Measurement Resolution
Attribute (see "Attribute" above)
OR
Codeset Domain
Codeset Name
Codeset Source
OR
Unrepresentable Domain
(can be repeated unlimited times)
Beginning Date of Attribute Values
Ending Date of Attribute Values
Attribute Value Accuracy Information
Attribute Value Accuracy
Attribute Value Accuracy Explanation
Attribute Measurement Frequency
LEGEND
mandatory
mandatory if applicable
optional
3-D Box Indicates Data Entry Field


CSDGM Version 2 - 1998
(FGDC-STD-001 June 1998)
Section 7
Metadata Reference Information
Metadata Reference Information 7.
7.1
Metadata Date
7.2
Metadata Review Date
7.3
Metadata Future Review Date
7.4
Metadata Contact
Contact Information (see section 10)
7.5
Metadata Standard Name
7.6
Metadata Standard Version
7.7
Metadata Time Convention
7.8
Metadata Access Constraints
7.9
Metadata Use Constraints
7.10
Metadata Security Information
Metadata Security Classification System
Metadata Security Classification
Metadata Security Handling Description
7.11
Metadata Extensions (can be repeated unlimited times)
Online Linkage (can be repeated unlimited times)
Profile Name
LEGEND
mandatory
mandatory if applicable
optional
3-D Box Indicates Data Entry Field

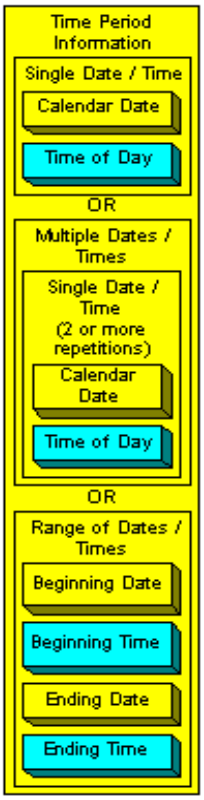
Section 8

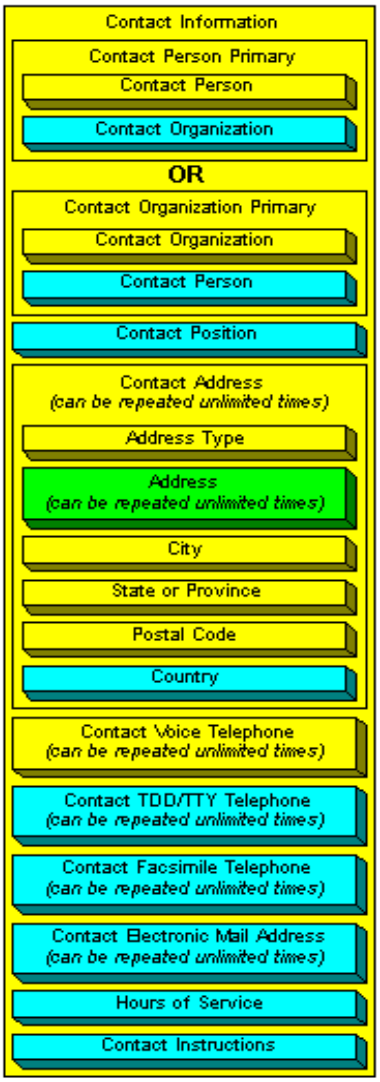
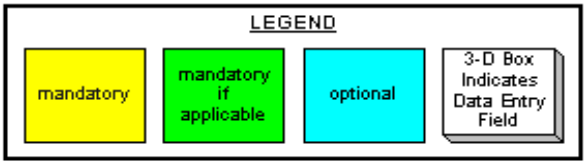
Citation Information



Section 9

Time Period Information



Section 10

Contact Information