Introduction to Geospatial Metadata

A One-Day Workshop, 9 June 2005

Presented by:
Eric Hopkins, GIS Analyst

West Virginia GIS Technical Center (WVGISTC)
Department of Geology and Geography
West Virginia University
Morgantown, WV 26506

Let’s Make Metadata

Introduce yourself to the group using this format:

Title (name)

Theme Keywords (work, play, life)

Supplemental Information (unique characteristic)

Title (name): *Eric Hopkins*
Theme_keyword: *WV GIS Technical Center*
Theme_keyword: *hiking*
Theme_keyword: *kayaking*
Theme_keyword: *sailing*
Theme_keyword: *music*
Theme_keyword: *dulcimer*
Theme_keyword: *reading*

Supplemental_information: *Eric Hopkins enjoys identifying plants while out on walks and hikes.*

Introduction to Geospatial Metadata: Workshop Outline

Objectives for this workshop
Metadata concepts
Purpose for using metadata
Acronyms
The Content Standard for Digital Geospatial Metadata (CSDGM)
Approaches to creating metadata
    Templates
    ArcCatalog forms
    Text editing
Tools for editing and parsing metadata for CSDGM compliance
    Metadata Parser (mp)
    TKME
    XML editor
Applying knowledge and tools to your data sets
Links to online metadata resources

Objectives for this workshop

This workshop enables you to:

- read and comprehend formal metadata.
- understand the purpose and value of metadata.
- discriminate between minimal and quality metadata.
- locate and access online resources.
- begin exploring methods that work best for you.

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What is geospatial metadata?

WHO created the data?
WHAT is the content of the data?
WHEN was it created?
WHERE is it geographically?
HOW was the data developed?
WHY was the data developed?


title
supplemental information
abstract
time period
author
sources
(file) size
V8

entity

attributes

Nutrition Facts

Serving Size ½ cup (114g)
Servings Per Container 4

Amount Per Serving

Calories 90	Calories from Fat 30
	% Daily Value*
Total Fat 3g	**5%**
Saturated Fat 0g	**0%**
Cholesterol 0mg	**0%**
Sodium 300mg	**13%**
Total Carbohydrate 13g	**4%**
Dietary Fiber 3g	**12%**
Sugars 3g	
Protein 3g	

Vitamin A 80% • Vitamin C 60%
Calcium 4% • Iron 4%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

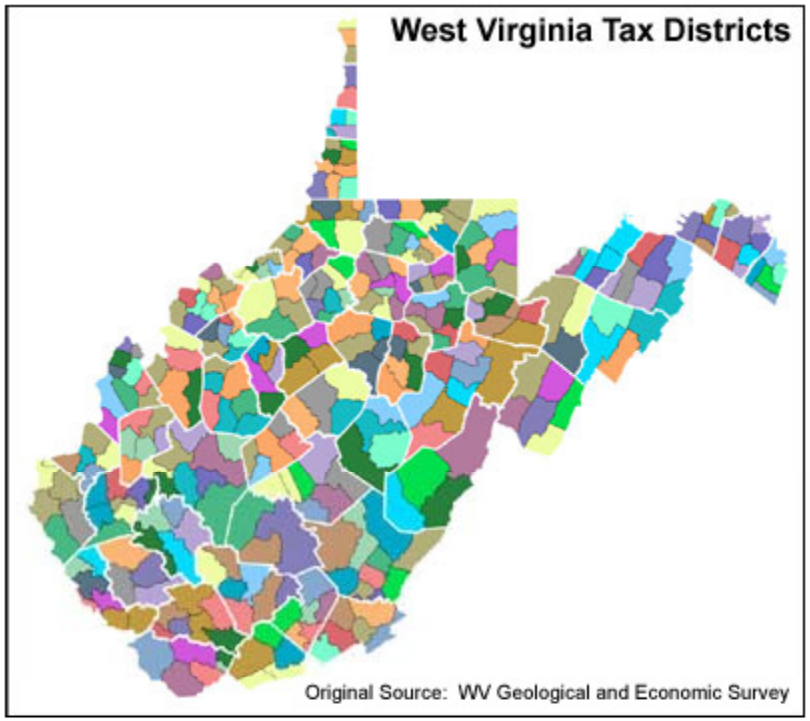
Menu

- About the Center
- GIS News
- GIS Data
  - Search Data
  - Keyword Search
  - List All Data
  - New and Revised Data
  - Index and Status Maps
  - WV Gazetteer
- Internet Mapping
- Training and Education
- State GIS Directory
- State GIS Activities
- Products
- Links
- Site Map

NSDI Geospatial One-Stop

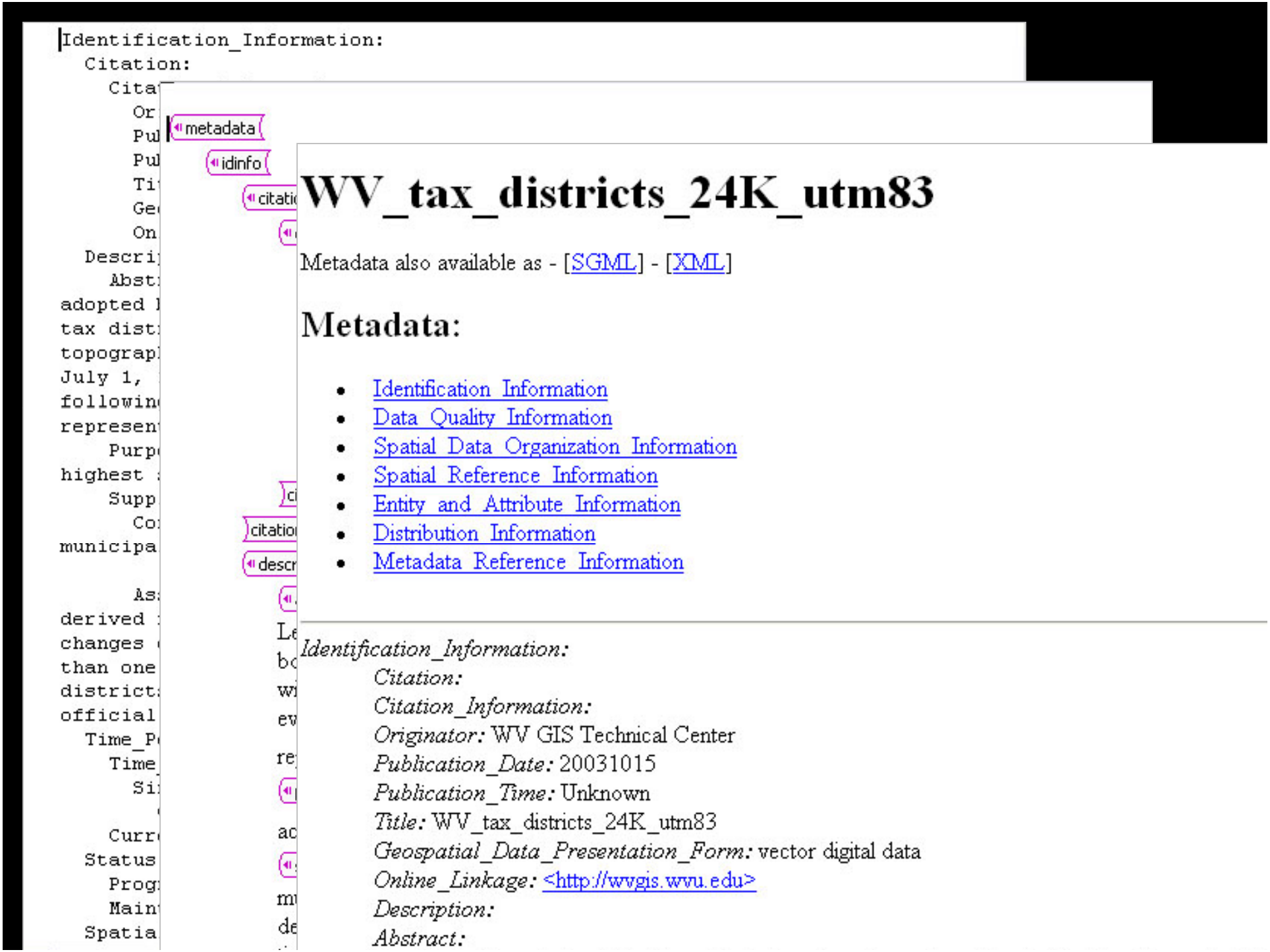
Tax District Boundaries

Download | Summary Metadata | Full Metadata



Printable Version

Click Here!


Identification_Information:
Citation:
metadata
idinfo
WV_tax_districts_24K_utm83
Metadata also available as - [SGML] - [XML]
Metadata:
Identification Information
Data Quality Information
Spatial Data Organization Information
Spatial Reference Information
Entity and Attribute Information
Distribution Information
Metadata Reference Information
Identification_Information:
Citation:
Citation_Information:
Originator: WV GIS Technical Center
Publication_Date: 20031015
Publication_Time: Unknown
Title: WV_tax_districts_24K_utm83
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: <http://wvgis.wvu.edu>
Description:
Abstract:

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Why use metadata?

Data developers and distributers use metadata to

- avoid duplication of effort.
- reduce labor and time costs.
- share information, internally and externally.
- publicize their work.
- protect their investment through personnel changes.
- limit their liability.

Why use metadata?

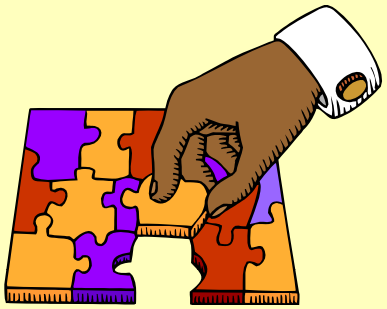
Data consumers use metadata to

- better understand the data set that they have acquired.
- focus on data elements key to their efforts.
- discover data inside and outside of their organization.
- access geospatial data via web mapping services

The changing paradigm of geospatial data production and distribution

Centralized

A data set may be produced, stored and maintained by a single organization.



Distributed

Local or regional organizations produce and store data that is accessible via services operated under national standards.

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Acronyms

FGDC: *Federal Geographic Data Committee*
CSDGM: *Content Standard for Digital Geospatial Data*
NSDI: *National Spatial Data Infrastructure*
ISO: *International Standards Organization*
GOS: *Geospatial One-Stop*

See the links included at the end of this document for more information.

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FGDC-STD-001-1998

Content Standard for Digital Geospatial Metadata

Metadata Ad Hoc Working Group
Federal Geographic Data Committee

Established by Office of Management and Budget Circular A-16, the Federal Geographic Data Committee (FGDC) promotes the coordinated development, use, sharing, and dissemination of geographic data.

The FGDC is composed of representatives from the Departments of Agriculture, Commerce, Defense, Energy, Housing and Urban Development, the Interior, State, and Transportation; the Environmental Protection Agency; the Federal Emergency Management Agency; the Library of Congress; the National Aeronautics and Space Administration; the National Archives and Records Administration; and the Tennessee Valley Authority. Additional Federal agencies participate on FGDC subcommittees and working groups. The Department of the Interior chairs the committee.

FGDC subcommittees work on issues related to data categories coordinated under the circular. Subcommittees establish and implement standards for data content, quality, and transfer; encourage the exchange of information and the transfer of data; and organize the collection of geographic data to reduce duplication of effort. Working groups are established for issues that transcend data categories.

For more information about the committee, or to be added to the committee's newsletter mailing list, please contact:

Federal Geographic Data Committee Secretariat
c/o U.S. Geological Survey
590 National Center
Reston, Virginia 20192

Content Standard for Digital Geospatial Metadata Workbook

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

Version 2.0

Federal Geographic Data Committee

May 1, 2000

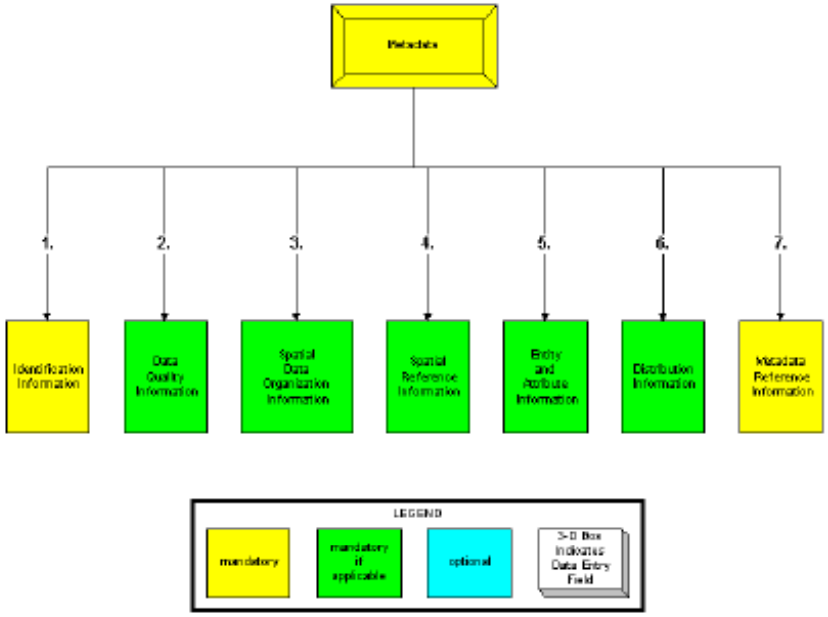
Federal Geographic Data Committee
Department of Agriculture • Department of Commerce • Department of Defense • Department of Energy
Department of Health & Human Services • Department of Housing and Urban Development
Department of the Interior • Department of Justice • Department of State
Department of 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

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



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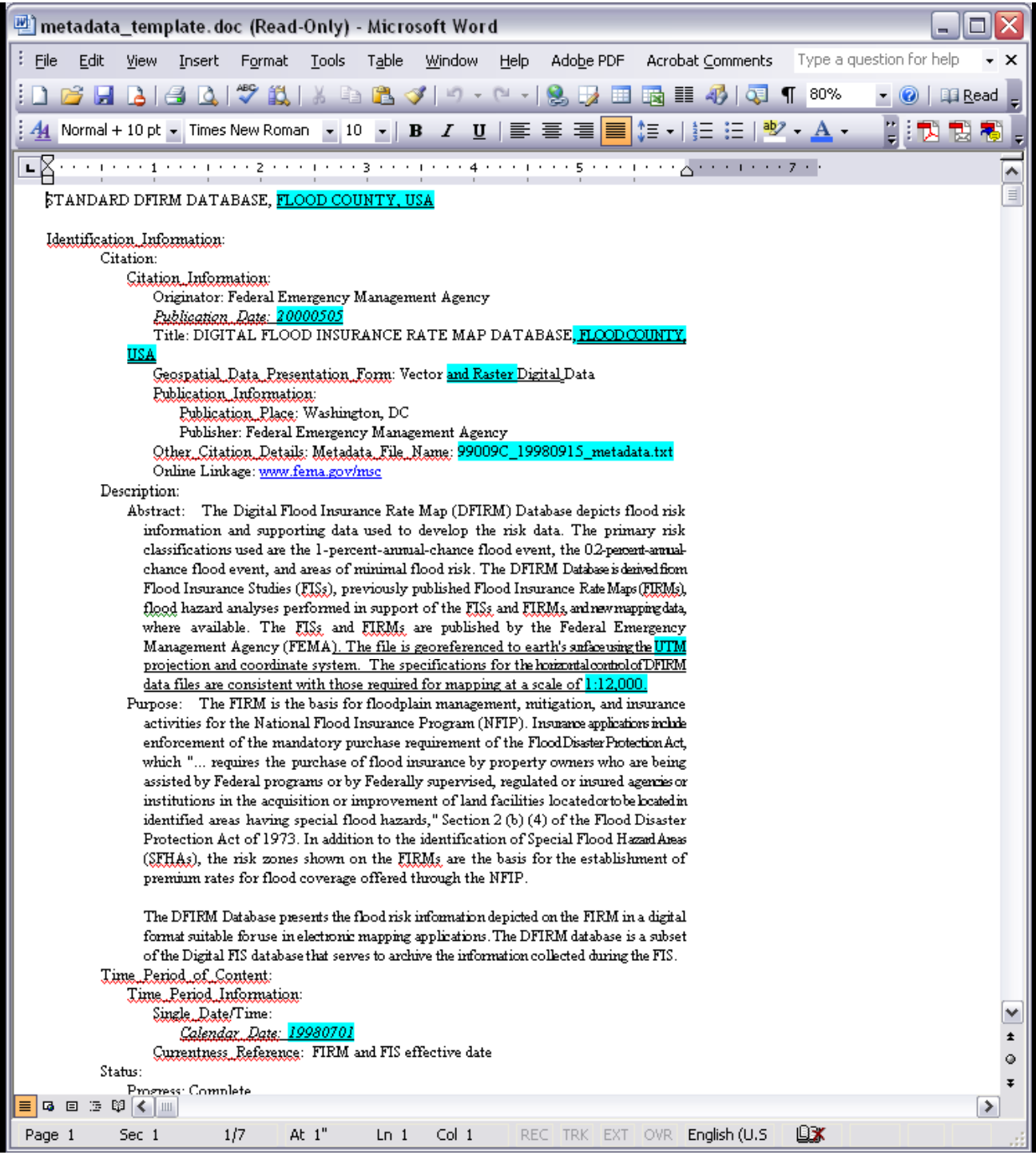
metadata_template.doc (Read-Only) - Microsoft Word
File Edit View Insert Format Tools Table Window Help Adobe PDF Acrobat Comments
Type a question for help
Normal + 10 pt
Times New Roman
10
STANDARD DFIRM DATABASE, FLOOD COUNTY, USA
Identification_Information:
Citation:
Citation_Information:
Originator: Federal Emergency Management Agency
Publication_Date: 20000505
Title: DIGITAL FLOOD INSURANCE RATE MAP DATABASE, FLOOD COUNTY, USA
Geospatial_Data_Presentation_Form: Vector and Raster Digital Data
Publication_Information:
Publication_Place: Washington, DC
Publisher: Federal Emergency Management Agency
Other_Citation_Details: Metadata_File_Name: 99009C_19980915_metadata.txt
Online Linkage: www.fema.gov/msc
Description:
Abstract: The Digital Flood Insurance Rate Map (DFIRM) Database depicts flood risk information and supporting data used to develop the risk data. The primary risk classifications used are the 1-percent-annual-chance flood event, the 02-percent-annual-chance flood event, and areas of minimal flood risk. The DFIRM Database is derived from Flood Insurance Studies (FISs), previously published Flood Insurance Rate Maps (FIRMs), flood hazard analyses performed in support of the FISs and FIRMs, and new mapping data, where available. The FISs and FIRMs are published by the Federal Emergency Management Agency (FEMA). The file is georeferenced to earth's surface using the UTM projection and coordinate system. The specifications for the horizontal control of DFIRM data files are consistent with those required for mapping at a scale of 1:12,000.
Purpose: The FIRM is the basis for floodplain management, mitigation, and insurance activities for the National Flood Insurance Program (NFIP). Insurance applications include enforcement of the mandatory purchase requirement of the Flood Disaster Protection Act, which "... requires the purchase of flood insurance by property owners who are being assisted by Federal programs or by Federally supervised, regulated or insured agencies or institutions in the acquisition or improvement of land facilities located or to be located in identified areas having special flood hazards," Section 2 (b) (4) of the Flood Disaster Protection Act of 1973. In addition to the identification of Special Flood Hazard Areas (SFHAs), the risk zones shown on the FIRMs are the basis for the establishment of premium rates for flood coverage offered through the NFIP.
The DFIRM Database presents the flood risk information depicted on the FIRM in a digital format suitable for use in electronic mapping applications. The DFIRM database is a subset of the Digital FIS database that serves to archive the information collected during the FIS.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 19980701
Currentness_Reference: FIRM and FIS effective date
Status:
Progress: Complete
Page 1 Sec 1 1/7 At 1" Ln 1 Col 1 REC TRK EXT OVR English (U.S

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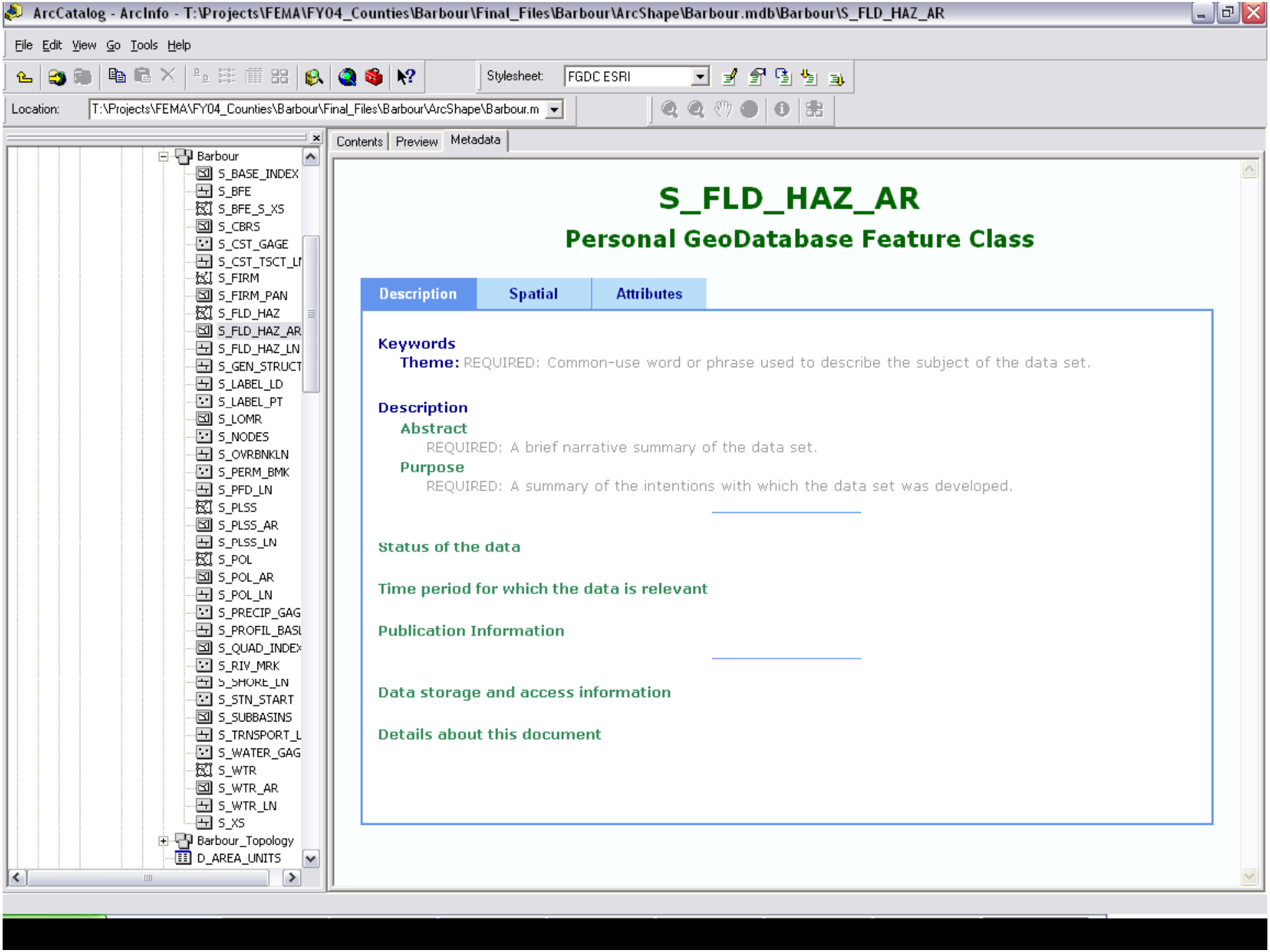
ArcCatalog - ArcInfo - T:\Projects\FEMA\FY04_Counties\Barbour\Final_Files\Barbour\ArcShape\Barbour.mdb\Barbour\S_FLD_HAZ_AR
File Edit View Go Tools Help
Stylesheet: FGDC ESRI
Location: T:\Projects\FEMA\FY04_Counties\Barbour\Final_Files\Barbour\ArcShape\Barbour.m
Barbour
S_BASE_INDEX
S_BFE
S_BFE_S_XS
S_CBRS
S_CST_GAGE
S_CST_TSCT_LI
S_FIRM
S_FIRM_PAN
S_FLD_HAZ
S_FLD_HAZ_AR
S_FLD_HAZ_LN
S_GEN_STRUCT
S_LABEL_LD
S_LABEL_PT
S_LOMR
S_NODES
S_OVRBNKLN
S_PERM_BMK
S_PFD_LN
S_PLSS
S_PLSS_AR
S_PLSS_LN
S_POL
S_POL_AR
S_POL_LN
S_PRECIP_GAG
S_PROFIL_BASL
S_QUAD_INDEX
S_RIV_MRK
S_SHORE_LN
S_STN_START
S_SUBBASINS
S_TRNSPORT_L
S_WATER_GAG
S_WTR
S_WTR_AR
S_WTR_LN
S_XS
Barbour_Topology
D_AREA_UNITS
Contents Preview Metadata
S_FLD_HAZ_AR
Personal GeoDatabase Feature Class
Description Spatial Attributes
Keywords
Theme: REQUIRED: Common-use word or phrase used to describe the subject of the data set.
Description
Abstract
REQUIRED: A brief narrative summary of the data set.
Purpose
REQUIRED: A summary of the intentions with which the data set was developed.
Status of the data
Time period for which the data is relevant
Publication Information
Data storage and access information
Details about this document

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Command Prompt (2)
C:\>mp
mp 2.7.33 - Peter N. Schweitzer (U.S. Geological Survey)
Usage: mp [options] input-file
Parse FGDC metadata, report structural errors and generate useful
re-expressions of the information.
input-file is indented text or sgml or xml
Options:
-c config-file Read supplied config-file for more options
-l language-code Use element names in the language specified
-e error-file Write errors to the named error-file
-t text-file Write indented text to the named text-file
-h html-file Write outline-style HTML to the named html-file
-f faq-file Write FAQ-style HTML to the named html-file
-s sgml-file Write SGML to the named sgml-file
-x xml-file Write XML to the named xml-file
-d dif-file Write DIF (NASA. v6) to the named dif-file
-fixdoc Run special clean-up on DOCUMENT.aml output
Language codes are 2-letter abbreviations
en English (default)
es Spanish
ca Catalan
id Indonesian
fr French (not implemented, in prep)
Further information at <http://geology.usgs.gov/tools/metadata/>
C:\>

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Federal Geographic Data Committee (FGDC)
http://fgdc.gov/

Metadata Workbook (FGDC “Green Book”)
http://fgdc.gov/metadata/meta_workbook.html

Content Standard for Digital Geospatial Metadata
http://fgdc.gov/metadata/contstan.html (overview, links to documents)

National Spatial Data Infrastructure (NSDI)
http://www.fgdc.gov/nsdi/nsdi.html

Wisconsin *‘Metadata Primer’*
http://www.geography.wisc.edu/sco/wisclinc/metatool/

Geospatial One-Stop
http://www.geodata.gov/gos

West Virginia GIS Technical Center
http://wvgis.wvu.edu/