FGDC Metadata Workshop Core Curriculum for *Metadata Creators*
Suggested *minimum* content based upon workshop duration

Metadata Workshop Subjects — Workshop Duration

Core Curriculum	1 Hour	½ Day	1 Day	1 ½ Day	2+ Day
What is Metadata?	◉	◉	◉	◉	◉
Value of Metadata	◉	◉	◉	◉	◉
National Spatial Data Infrastructure	◉	◉	◉	◉	◉
Framework Data Themes	◉	◉	◉	◉	◉
Geodata.gov	◉	◉	◉	◉	◉
• **demo or hands-on**		◉	◉		
• **participating in geodata.gov**			◉	◉	◉
• **Market Place**			◉	◉	◉
CSDGM Standard - overview	◉	◉	◉	◉	◉
• **Graphic Representation diagrams**		◉	◉	◉	◉
• **quick review**		◉	◉	◉	◉
• **using the Greenbook**			◉	◉	◉
• **detailed review**			◉	◉	◉
Quality Metadata – general review	◉				
• ***Bakers' Dozen* review**		◉			
• ***Metadata Quick Guide* review**			◉	◉	◉
Metadata Tools – general review		◉	◉	◉	◉
Hands-on Metadata Creation: hard copy forms and exercises		◉			
Hands-on Metadata Creation: computer					
• **software specific instruction**			◉	◉	◉
• **hands-on parsing (mp)**			◉	◉	◉
• **digital template/select section**			◉		
• **digital full record**			◉	◉	◉
Geospatial data discovery and access via NSDI Clearinghouse or GOS Portal			◉	◉	◉
Optional Modules					
Making Metadata Part of the Process*			◉	◉	◉
Transition to ISO 19139				◉	◉
Framework Metadata					◉
Creating Functional Templates					◉
One-on-one consultation					◉

FGDC Metadata Workshop Core Curriculum for Managers
Suggested *minimum* content based upon workshop duration

Core Curriculum	1 Hour	2 Hours
What is Metadata?	◉	◉
Value of Metadata	◉	◉
National Spatial Data Infrastructure	◉	◉
• **Framework**	◉	◉
• **Geodata.gov**	◉	◉
• **Standards**	◉	◉
Business Case: Metadata *		
• **Budget**		◉
• **Staff**		◉
• **Workflow management**		◉
Making Metadata Part of the Process*		◉

FGDC Metadata Workshop Core Curriculum for Metadata Creators
Module Learning Objectives

Note: Learning Objectives are presented for the one-day workshop and should be expanded or selectively edited for workshops of different durations and target audiences. One-day and longer workshops intend to instill metadata creation skills and abilities. One-hour and half day workshops intend to introduce metadata concepts to the novice or non-creator participant.

Curriculum Module:	Learning Objectives:
	After completing the module the successful learner is able to:
What is Metadata?	
	• illustrate the concept of metadata using a common analogy, *e.g. product label, journalistic reporting, notes on a photo*.
	• explain metadata as a element of the data.
	• describe metadata creation and maintenance as a GIS best practice.
Value of Metadata	
	• identify at least four values of metadata, *e.g., data distribution and discovery, data assessment and consumer info, data access, data archive, data management.*
	• elaborate upon the role of metadata in data management, *e.g. internal data discovery, assess data currency, monitor data development, contractor deliverable.*
	• Build agency support by making the business case and list the factors.
National Spatial Data Infrastructure	
	• explain what is the NSDI
	• state the vision of the NSDI.
Framework Data Standards	
	• define what is a framework standard.
	• explain the concept of Framework.
	• list the seven primary Framework themes.
	• describe the value of implementing framework data content standards.
	• discuss the purpose of framework standards to facilitate data sharing

not as full content implementation discuss how framework data information is documented in metadata.

Geodata.gov – general

- discuss purpose and goals
- locate and access the portal.
- describe at least four of the six functions of the website, *e.g. search for data, create metadata, publish metadata, identify community-specific resources via a theme Channel, identify and post data acquisition partnership opportunities.*
- discuss the benefits of participating with geodata.gov.
- discuss the value of the "Market Place"

- ### Geodata.gov demo or hands-on
  - explore the website.
  - successfully locate desired information

- ### participating in geodata.gov

  - insert *ISO 19139 Topic Category Codes* into their metadata collections as *Theme_Keywords.*
  - publish geospatial resources via the website.

Standard – general

- recognize that the standard is extensive because it must support a wide range of geospatial data types, *e.g. GIS, imagery, CAD, dbases, field notes and photographs*.
- describe the general content of the CSDGM or the ISO 19115/19139.
- differentiate between a Section, Compound Element, and Data Element.
- Acknowledge and apply information format requirements such as date.

- **"Graphic Representation" diagrams**

  - determine the conditionality of any element.

- **Review the CSDGM**

  - describe the content of the primary sections of the CSDGM.
  - describe the content of three supporting sections of the CSDGM
  - express *Bounding_Coordinates* in the required format.
  - express dates in the required format

- **using the Greenbook**

  - locate the definition of any element.
  - Interpret the information format required.
  -
  - utilize FAQs and example metadata.

- **detailed review**

  - describe the content of each primary section of the CSDGM.
  - determine applicability of remaining standard sections to documenting specific data sets.
  - describe how using 'template' approach can simplify and expedite metadata creation

Quality Metadata - general

  - differentiate between minimally compliant and quality metadata.

- ***Bakers' Dozen* review**

  - list five rules for writing quality metadata.

- ***Metadata Quick Guide* review**

  - write a complete *Title* and *Abstract.*
  - identify one use for *Supplemental_Information.*
  - determine when to provide an *Entity_&_Attribute Overview_Description* vs. a *Detailed_Description.*

- describe special values for two CSDGM elements that will facilitate transition to ISO 19139 and/or utility of the record within Geodata.gov, *e.g., provide multiple Online_Linkage values (data viewing, data download, web-mapping services); use of ISO 19115 Topic Category Code as Theme_Keywords.*

Metadata Tools – general review

- evaluate metadata tool options based on agency needs/limitations
- select the software for access or purchase.

Hands-on Metadata Creation: hard-copy forms and exercises

- complete the form or exercise using their own data resources.

Hands-on Metadata Creation: computer

- **software specific instruction**

  - explore and generally operate the tool.

- **hands-on parsing (mp)**

  - parse their own metadata.
  - interpret the error report.
  - edit the metadata record.
  - Create error-free metadata
  - Create various metadata formats
  - View completed metadata via web browser.

- **digital template/select section**

  - select metadata elements to create agency specific metadata template
  - complete template of subset of elements.

- **digital full record**

  - complete a full error-free metadata record for their own data resources.

Discover and access geospatial Metadata via registered NSDI Clearinghouse or NSDI Clearinghouse Gateway

- discuss the purpose of the NSDI clearinghouse
- using the search interface, successfully discover and access geospatial metadata posted to a NSDI clearinghouse or GOS Portal

Optional Modules

Making Metadata Part of the Process

- present the business case for metadata to their administration.
- create an organizational metadata template (pertinent fields and some core content).
- implement at least two changes in their data development workflow that incorporates metadata creation.
- draft a metadata creation and management guideline document.

Transition to ISO 19139

- explain the relationship between FGDC, ANSI, and ISO as standards bodies.
- cite two advantages of implementing the ISO 19115 or 19139 standard.
- cite two elements or features provided by the ISO 19115 standard.
- recognize that agencies should continue to create CSDGM format metadata until ISO 19139 is implemented
- outline steps for preparing for the transition to ISO, *e.g. inform admin and technical staff of the pending change, include ISO Topic Category Codes as Theme_Keywords, monitor the dgiwg metadata website, participate in calls for review.*

Feature-level Metadata

- extract features from an existing geospatial database and generate metadata for each.

Creating Functional Templates

- create an organizational, theme, or project specific metadata template by extracting all pertinent metadata fields from the CSDGM and identifying those fields that will require standardized language.

Survey of Standards

- discuss the value of standards
- identify three geospatial standards bodies
- identify two of five US standards policies
- discuss content, accuracy, classification, metadata, impact data interoperability.

FGDC Metadata Workshop Core Curriculum for *Metadata Managers*
Module Learning Objectives

Note: Learning Objectives are presented for the one-two workshop and should be expanded or selectively edited for workshops of different durations and mixed target audiences.

Metadata for Manager's core content - 1 – 2 hours

What is Metadata

- illustrate the concept of metadata using a common analogy, *e.g. product label, journalistic reporting, notes on a photo*.
- explain metadata as a element of the data
- List three White House guidances referencing metadata as a requirement

The Value of Metadata

- describe metadata creation and maintenance as a data management and fiscal responsibility.

NSDI Overview
   Framework

- Discuss the value of Framework

   Geodata.gov

- Discuss the Geodata.gov concept
- Recognize value of supporting Geodata.gov
- Advocate supporting geodata.gov

Business Case: Metadata
   Budget

- Recognize metadata as a data management activity
- Encourage project managers to budget for metadata

   Staff

- Recognize metadata as an employment skill
- Include metadata as a skill set for recruiting and hiring.

   Workflow management

- Incorporate metadata into data workflow.
- Allow time in project plan to create and update metadata.

Making Metadata Part of the Process

- Develop an agency-wide metadata plan which includes clearinghouse or other metadata repositiory.

FGDC Metadata Workshop Core Curriculum for *Metadata Trainers*
Module Learning Objectives

Note: Learning Objectives are presented for the three-day workshop and should be expanded or selectively edited for workshops of different durations.

Train the (Metadata) Trainer core content-
Overall course objectives:

- Implement metadata training programs to address data issues specific to their agencies and data partners.

- Build a metadata training network to support metadata implementation.

- Develop and present an interactive, energized, and memorable metadata workshop.

- Construct a workshop around the participant's expectations and learning styles to make the metadata content stick.

- Develop lesson plans and training modules and exercises for reuse by other trainers and contributing to FGDC's metadata training resources.

- Mine training tips and methods from experienced metadata creators and trainers to increase metadata creator ability.

Day 1 course objectives

Making a memorable workshop
    What is training

- Engage the audience and direct attention to learning mode.
- Differentiate between training and education
- Analyze audience training needs.
- Develop training materials to meet various learning styles.

Instructional Objectives

- Develop instructional content to meet agency implementation needs based on measureable outcomes
- Establish learning criteria to reflect the value of the training exercise

Instructional Methods

- Utilize various instructional methods to energize and engage the audience.

Presenting the workshop
    Training aids and visuals

- Integrate training aids and visuals appropriately to enhance learning.

    Presentation Styles and Skills

- Present course materials effectively to fully and accurately relay content.

Lesson Plans

- Develop lesson plans complete with learning goals and objectives to allow others to utilize the lesson

Classroom management

- Arrange, modify, and regulate physical space and environment creating an inviting learning atmosphere.

Targeting Metadata Training

- Develop metadata workshops following FGDC recommended core curriculum and constructed around audience type, format, time frame, and other issues.

- Discuss methods to reduce training costs

- Locate supplemental metadata training materials

- Address special training situations/issues

Day 2

Laboratory day to apply skills

from Day 1:

- Create lesson plan complete with learning goal and objectives, outline.

- Select metadata topic and prepare interactive metadata exercise.

- Test metadata exercise.

- Prepare materials for metadata exercise

Day 3

Presenter

- overview lesson plan, goal, objectives with audience.

- Present metadata lesson.

Audience

- Participate in presented metadata exercise
- Evaluate presentation based on materials presented in day 1

Post workshop follow-up

- Participants register as metadata trainers on the FGDC metadata trainer registry.