

# **GUIDE TO CREATING AND EXPOSING FGDC COMPLIANT METADATA**

**Georgia Department of Natural Resources | Georgia Tech Center for Geographic Information Systems  
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**Creating Federal Geographic Data Committee (FGDC) Compliant Metadata**

All geospatial data provided to the Georgia Department of Natural Resources must include metadata that is compliant with the FGDC [Content Standard for Digital Geospatial Metadata \(CSDGM\)](#). This metadata is most easily created using ESRI's ArcGIS 10.x software suite (specifically, ArcCatalog).

Following are instructions on how to create FGDC CSDGM compliant metadata using ArcCatalog 10.1. Additional resources—including steps for metadata creation in different versions of ArcGIS—are available online at <http://resources.arcgis.com/en/help/>.

### *Steps to Create FGDC Compliant Metadata*

- Before the user begins creating standard-compliant metadata in ArcCatalog, the metadata style must be set to FGDC CSDGM. To do this, click *Customize* on the main menu and choose *ArcCatalog Options*. From the pop-up window, select the *Metadata* tab and choose 'FGDC CSDGM Metadata' from the drop down menu. Check the box next to 'Automatically update when metadata is viewed.' (1 minute)
  - Once this has been set, the style setting should remain the same on all ArcGIS programs until manually changed
  - In ArcMap, click *Customize* and *ArcMap Options* to open the options dialogue pop-up window and change the metadata style
- To view an item's metadata, select the item in the ArcCatalog table of contents and click the *Description* tab. Click the 'Edit' button to begin creating and editing the appropriate fields.
  - The metadata editor's table of contents displays a list of metadata pages and their validity (i.e. whether or not all of the FGDC standard rules are satisfied). If there are any problems with the information provided on a specific page, or if information is missing, the page icon will have a red X in the table of contents; page icons with no errors have a green check mark; and plain page icons have no rules concerning the information required.
  - When the user clicks on a page containing an error(s) in the table of contents, all errors that occur on that page are listed at the top next to red exclamation point icons. The specific missing or problematic fields are shown with a red background. As the information in these fields is created or edited, the list of errors at the top will update automatically. When all errors on a page have been fixed, a green check mark will appear on the page icon in the table of contents.
- When creating or editing metadata, click the *Save* button at the top left of the window often to ensure that any changes are not lost. Some mandatory FGDC metadata elements, such as the Metadata Standard Name, are populated and updated automatically by ArcGIS—the following covers the minimum mandatory set of FGDC CSDGM metadata content that must be manually created (10-30 minutes to create, depending on knowledge of data and thoroughness of information included):
  - **Overview**
    - *Item Description* page
      - Provide a title, abstract, and purpose for the item, and describe any constraints related to using the item. Enter the title in the 'Title' text box, the abstract in the 'Description (Abstract)' text box, the purpose in the 'Summary (Purpose)' text box, and the use

constraints in the 'Use Limitation' text box. If there are no use constraints for this data layer, leave the 'Use Limitation' text box empty.

- *Topics & Keywords* page
  - Click the 'New Theme Keywords' button and provide a list of keywords in the 'Theme Keywords' text box, with each new keyword on a separate line. If these keywords were selected using a thesaurus, type the reference title into the 'Title' text box under 'Thesaurus Citation.' If the keywords did not come from a thesaurus, leave the 'Thesaurus Citation' section empty.
- *Citation* page
  - Under 'Dates,' click the calendar icon next to 'Created,' 'Published,' and 'Revised' to select the relevant dates (note: only date of publication is mandatory). Using the calendar, the user can scroll through months using the arrows or click the month and year at the top to pick from a list. Click the year at the top of the calendar again to choose from a list of years.
  - The user may also identify the time the item was published, if applicable. Click the up and down arrows to set the hour, or click the hour and type the appropriate number. To set the minutes and seconds, click that portion of the time and enter the appropriate information.
- *Citation Contacts* page
  - Click 'New Contact,' then choose 'Originator' from the drop-down 'Role' list (Note: the user may add multiple contacts by clicking 'New Contact' for each, but only the originator is mandatory). Identify the individual and/or organization responsible for creating the data layer in the 'Name' and 'Organization' text boxes, respectively.
- **Metadata**
  - *Contacts* page
    - Click 'New Contact,' identify the point of contact for the item's metadata, and enter all relevant contact information. If an organization has been identified, this will be considered the primary contact when information is exported to an XML file.
- **Resource**
  - *Details* page
    - Click 'New Status' and select the appropriate value describing the item's progress from the drop-down list.
  - *Extents* page
    - If the data layer contains spatial information, a bounding box describing its extent will be added automatically to the metadata. If the item's metadata does not include a spatial extent, click 'New Extent,' then 'New Bounding Box' under the 'Extent' heading. Provide the appropriate coordinates for the data's bounding rectangle.

- If applicable, temporal extent(s) may also be included in this section. The user may describe how recently the spatial data was collected and/or created in the 'Description' text box. Provide the appropriate date or date range by clicking either the 'New Temporal Period Extent' or the 'New Temporal Instant Extent' under the 'Extent' heading. Multiple individual dates can be provided; the event that occurred at each date should be explained in the 'Description' text box.
  - For each temporal extent, click the calendar button and select the appropriate date (and time, if appropriate). A year, month, and day must be provided. The user can describe any uncertainties about the time period either in the extent's description or on the 'Quality' page in a data quality 'Report.'
    - Single Date (Instant Extent)
      - If the user enters only a year, the value stored in the metadata will automatically be set to January 1 of that year
      - If the user enters only a year and a month, the value stored in the metadata will be the first day of that month
    - Range of Dates (Period Extent)
      - If the data was collected throughout an entire month, enter the beginning and ending days of that month for the beginning and ending dates of the extent
      - If the user only knows that the data was published in a certain year, enter the beginning and ending days of that year for the beginning and ending dates of the extent
- *Maintenance* page
  - Using the 'Update Frequency' drop-down list, select the choice which best describes how often the data is updated
- *Constraints* page
  - If the user provided any use constraints on the 'Item Description' page under the **Overview** heading, it should automatically appear in the 'General Constraints' section. If this was not provided previously, the user should click 'New General Constraints,' then 'New Use Limitation.' If there are no use constraints associated with this item, leave the text box empty.
    - Any access constraints associated with the data can be provided on this page in the 'Other Constraints' box. If there are legal constraints associated with the data, click 'New Legal Constraints,' then click 'New Other Constraints.' If there are no access constraints associated with this item, leave these boxes empty.
- *Distribution* page

- If the item can be accessed on the Internet, provide a URL by clicking 'New Digital Transfer Options' (note: more than one URL can be entered for each data item). Under 'Digital Transfer Options,' click 'New Online Resource.' Enter the appropriate URL in the 'Linkage' text box.

### Exposing Metadata to Data.gov

Exposing metadata is most easily achieved using the GIS Inventory (<http://gisinventory.net/>). It is important to note that this service, created and maintained by the National States Geographic Information Council (NSGIC), does not actually host any data (data must be published elsewhere); rather, its primary purpose is to track data availability and the status of GIS implementation in state and local governments.

A critical component of the GIS Inventory is the Random Access Metadata for Online Nationwide Assessment (RAMONA) database. When a user adds a data layer to the GIS Inventory, minimally-compliant CSDGM metadata is automatically generated. RAMONA, a normalized database, moves this metadata to a web folder and a Catalog Service for the Web (CSW) that can then be harvested by programs such as the Geospatial Platform (<http://www.geoplatform.gov/>) and exposed to Data.gov (<http://www.data.gov/>).

Following are instructions to catalog geospatial data using the RAMONA GIS Inventory and to expose the metadata to Data.gov; additional help is available on the GIS Inventory home page under *Getting Started* and *Support*.

#### Steps to Expose Metadata to Data.gov

- Navigate to the GIS Inventory website (<http://gisinventory.net/>) and create an account using the 'Create New Account' button in the upper right corner of the page. (1-5 minutes; one time only)
- Once you have logged in, click *My Profile* on the main toolbar and fill out a full profile using the sections on the left. Click *Save* or *Save and Continue* before moving between sections to ensure your work is not lost. (20-25 minutes; one time only, but can/should be updated as necessary)
  - Reports, metadata templates, and search functions are automatically generated based on the information in these sections, so it is beneficial to complete all relevant fields.
  - Additionally, while completing the state-specific section is not required to inventory any data layers, the information provided will help to improve statewide coordination efforts.
- In the *My Geography* section, the user must define at least one geography—or jurisdictional extent of the data—in order to inventory data layers. If the data are nationwide, the user need only select 'Yes' and click *Save*. If the data are not nationwide but are statewide, check the boxes for all appropriate states, select 'Yes', and click *Save*. If the data are not statewide, the user must select the counties, cities, tribal areas, and/or coastal waters which apply to the data before clicking *Save*. (1-3 minutes)
  - The first geography profile created will be considered the default for your data, however the user can create as many geographies as necessary, and may associate different geographies with individual data layers that you document.

- If the data cover a watershed or other irregular (non-political) boundary, select the state(s), counties(s), etc. that most closely represent the extent of the data, and qualify this discrepancy in the Description field for the data layer(s).
- The *My Data Layers* section allows the user to inventory GIS data. Use the drop down menu or the 'Search for a layer' button to find the category most-closely related to the data layer being inventoried. Click *Document Data Layer* to bring up the data entry form window. Complete the information in the pop-up window, making sure to check the box next to 'Publish to Web', and click *Save*. (1-5 minutes per data layer)
  - This data layer should now appear on the *Data Layers* page of the main menu (this may take some time). If the user has more than one data set for the layer listed, simply click the *Document Data Layer* button again to open another entry form for the same data layer.
  - *Once the data layer(s) is listed on the Data Layers page, it should automatically appear on Data.gov*

<http://www.opengeospatial.org/standards/cat>

<https://www.data.gov/agencies/>

<http://project-open-data.github.io/>

<http://project-open-data.github.io/metadata-resources/>

\*\*\*<http://project-open-data.github.io/catalog-generator/>