



NJGIN Core

Simple Documentation with the ArcGIS Pro Metadata Editor

Abstract

The New Jersey Office of Information Technology, Office of GIS, publishes NJGIN Core as a brief and concise means to document shared authoritative geospatial content for the New Jersey GIS community via <https://njgin.nj.gov>

January 2023
Version 2.2

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NJGIN Core:

Simple Documentation with the ArcGIS Pro Metadata Editor (FGDC – CSDGM Style)

About NJGIN Core

https://geoapps.nj.gov/njgin/documents/MD_NJGIN_core_AGO_Pro.pdf

(To use the ArcGIS Online metadata editor, see separate document [NJGIN Core with the ArcGIS Online Metadata Editor](#))

The New Jersey Geographic Information Network (NJGIN) was founded by the NJ Office of Information Technology, Office of GIS (NJOGIS) in 2001 to facilitate the sharing of geospatial content in the New Jersey GIS community. The focal point of the network is the website <https://njgin.nj.gov>, where information consumers can search for geospatial content and data stewards can share their authoritative geospatial content. The search function makes use of Esri’s ArcGIS Online and Open Data platform, including links to records on partner sites.

Essential to sharing data sets is adequate documentation for each item to support discovery and assessment. To assist partner data stewards, NJOGIS publishes “NJGIN Core” as an abbreviated collection of elements. These can be entered using the ArcGIS Pro Metadata Editor, set to Style FGDC – CSDGM. These elements together answer the following questions:

- Does a data set exist on a particular topic?
- Does it exist for a particular location?
- What is the temporal context of the data set?
- Who can I contact to learn more about the data set?
- Is it possible to access the data set now?

NJGIN Core is software agnostic, except that ArcGIS Online requires ArcGIS format metadata. NJGIN Core metadata can be created most easily using ArcGIS Pro, ArcGIS Online, or ArcCatalog.

Below is a list of the essential elements, described in further detail in the later sections of this document.

- | | |
|--|--------------------------------|
| • Title | • Publication Date |
| • Description (Abstract) | • Summary (Purpose) |
| • Credits | • Status |
| • Keywords & Tags | • Location (geographic extent) |
| • Time Period of Content (temporal extent) | • Use Limitations |
| • Metadata date & language | • Point of Contact |

Why Use ArcGIS Pro?

- ◆ The metadata editing function in ArcGIS Pro works smoothly
- ◆ Information for more-complete metadata can be captured automatically by synchronizing
- ◆ The entire metadata record can be reviewed in an easy-to-read stylesheet display
- ◆ Metadata can be attached to the data and travel with it
- ◆ Can add a custom thumbnail image
- ◆ One-button export of ArcGIS xml or html – enables easy archiving of your collection
- ◆ Publication to ArcGIS Online can be done seamlessly both for data and for its associated metadata

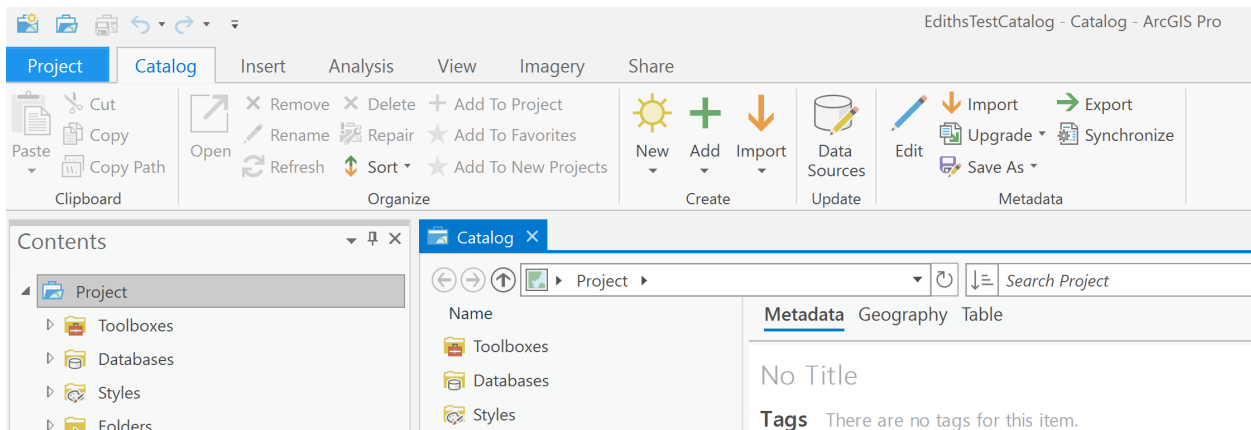
Why Not Use ArcGIS Pro?

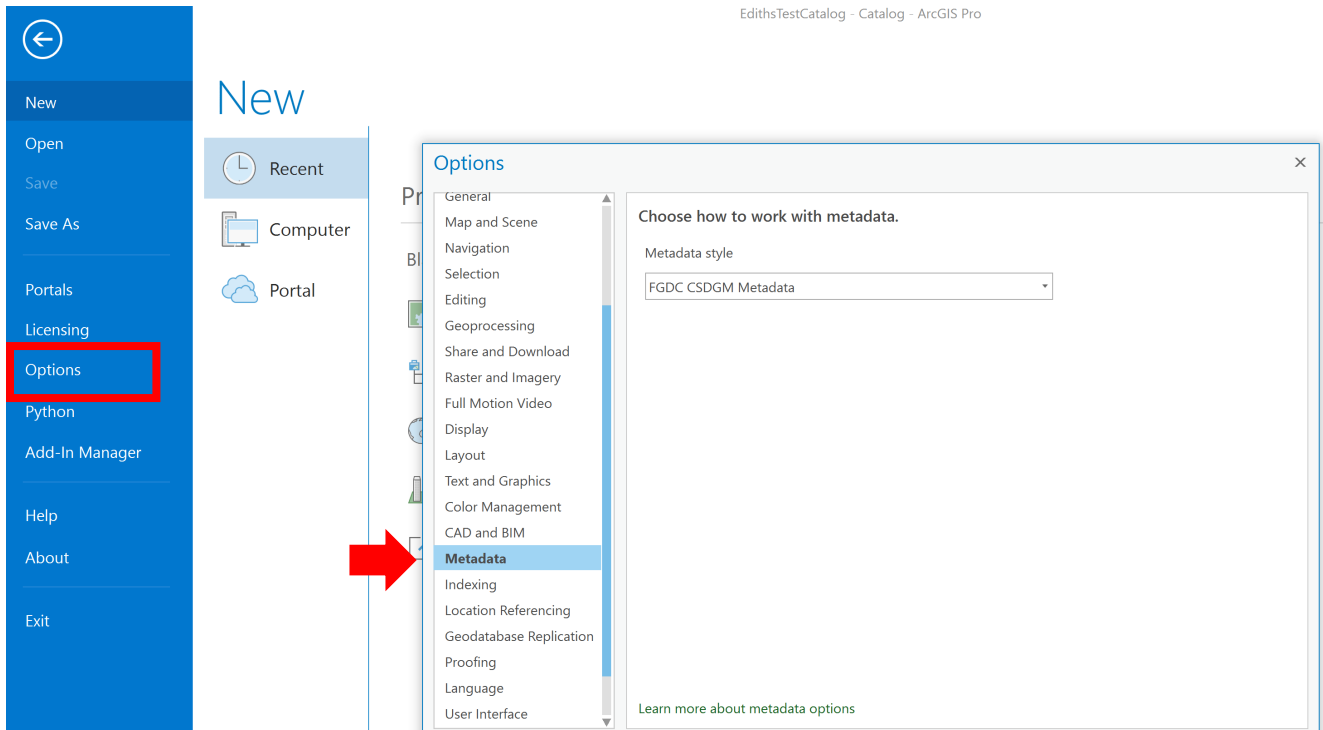
- ◆ Software install (and license) is required
- ◆ There are a few advanced metadata functions that cannot be performed easily in ArcGIS Pro as installed by default
- ◆ Experience with the overall software is needed

Directions

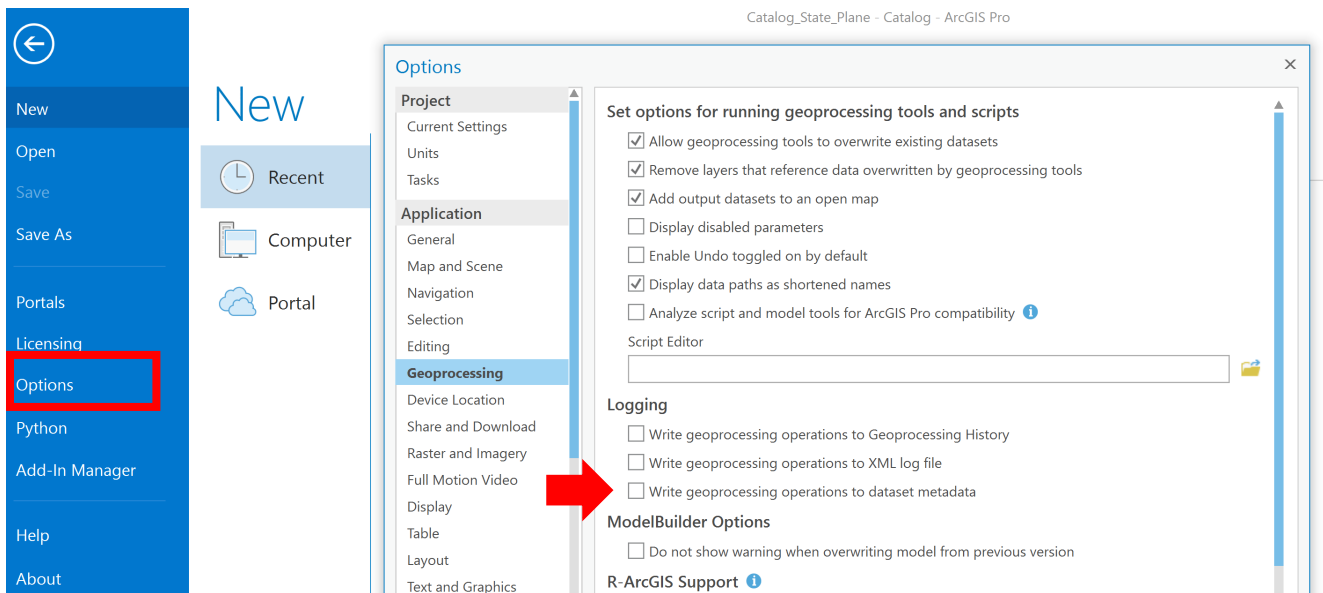
- ◆ Set up an ArcGIS Pro project, using the Catalog template.
- ◆ Configure the project to view/edit ArcGIS metadata in style FGDC-CSDGM

Go to Project -> Options -> Metadata and set to “FGDC CSDGM Metadata”

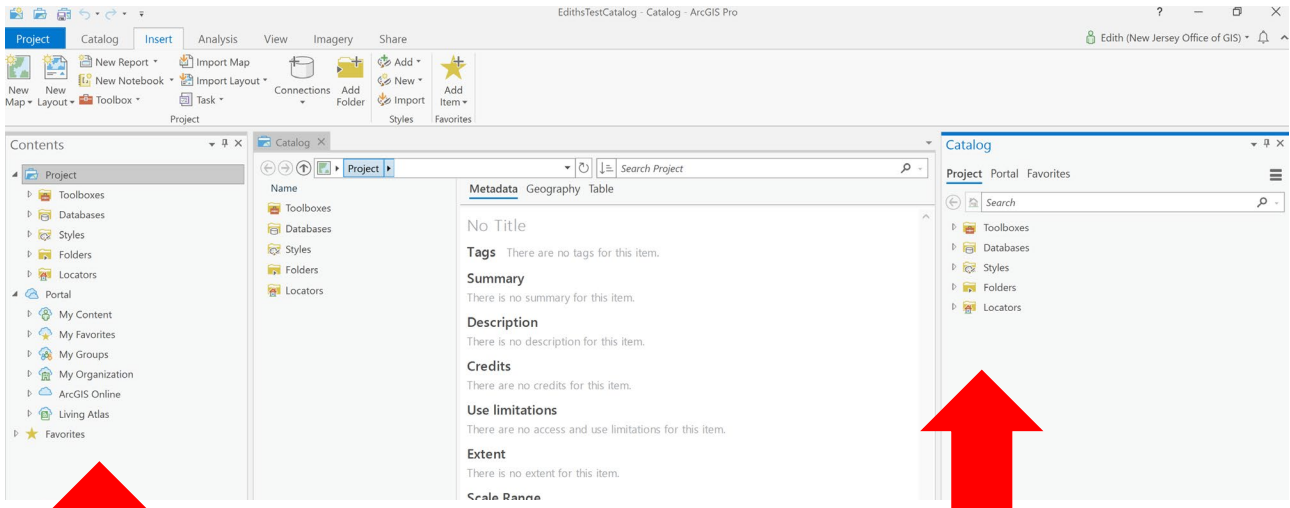




◆ If you want to avoid adding detailed automated processing steps to your metadata, check OFF that configuration (it may be ON by default):



◆ Configure the project to add the connections to data, using the Catalog pane



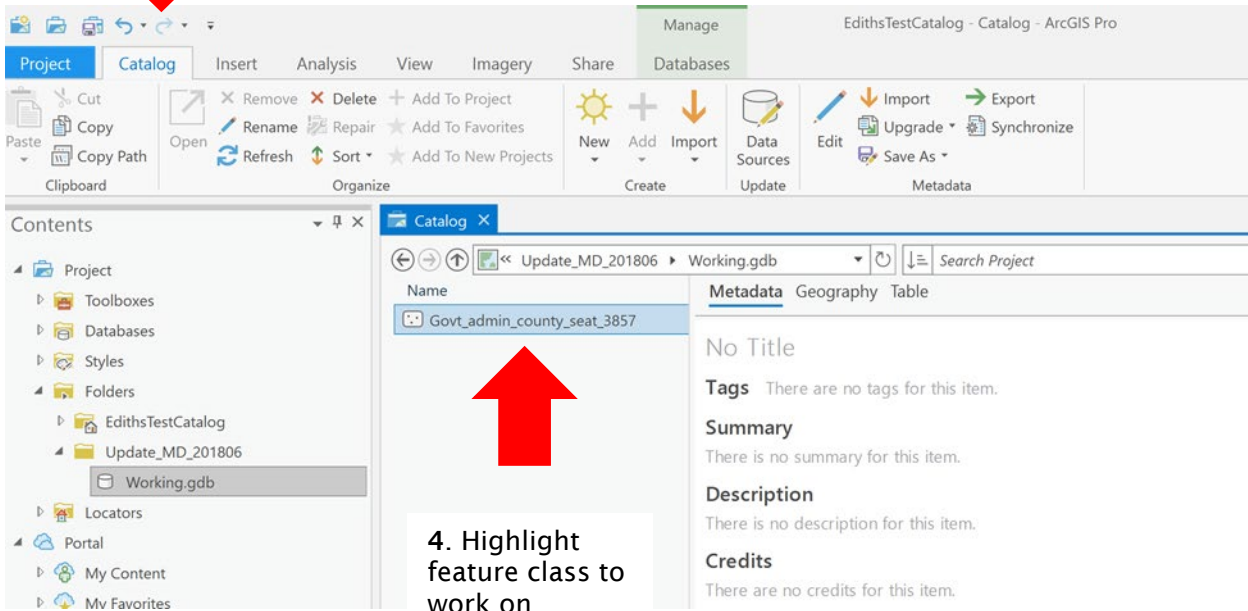
2. Once connections have been added, they will be available here.

1. Add connections to folders and databases here. If multiple panes are in use in Pro, you may first need to change tabs at the bottom of the Pro window

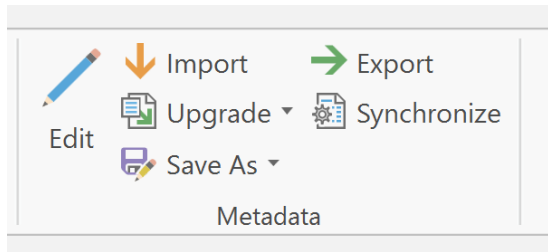
◆ Switch the project to Metadata Editing mode

3. Switch to Catalog tab

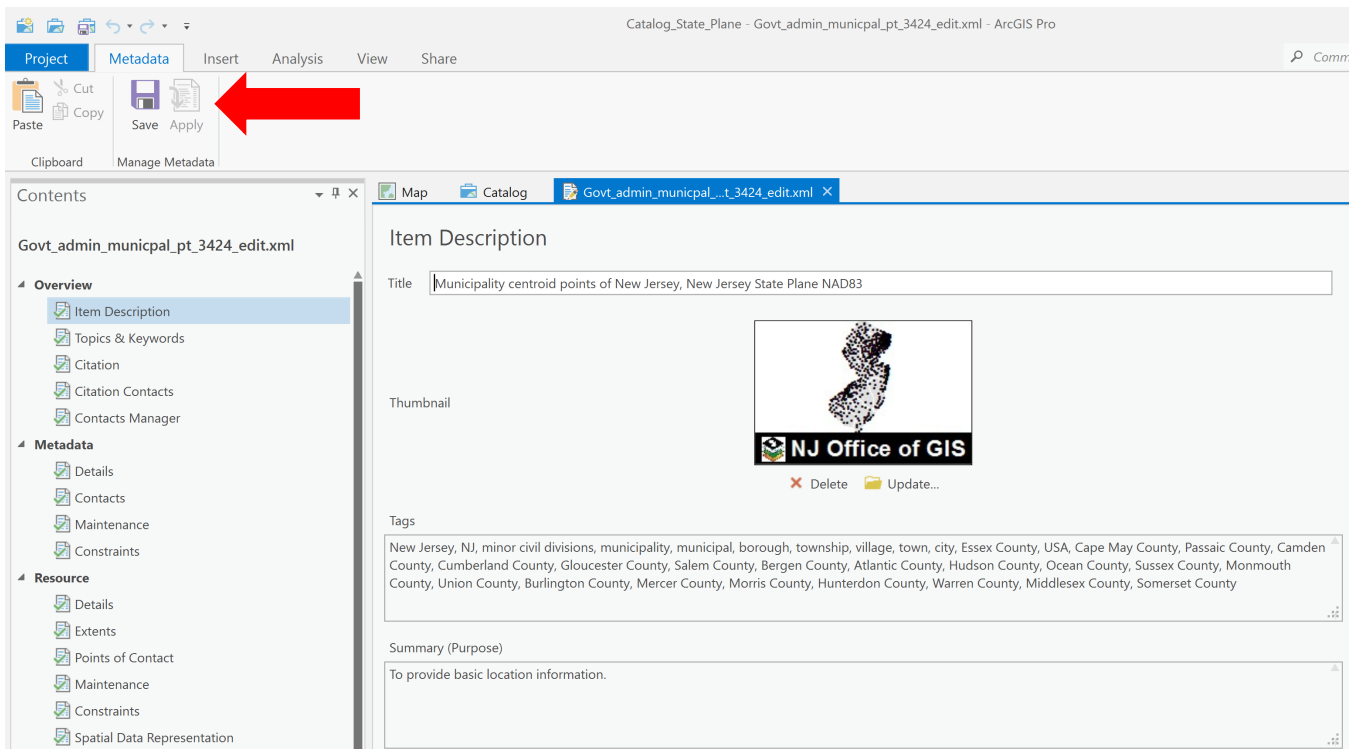
5. Synchronize and/or Edit metadata



4. Highlight feature class to work on



- ◆ Choose tool to use
 - *Edit* opens the metadata editor at the Item Description subsection. The ribbon changes to expose the Manage Metadata > Save button.
 - *Import* enables pulling existing metadata or a template into association with the active data. It will not completely over-write existing metadata, however.
 - *Upgrade* converts existing metadata in FGDC-CSDGM format to ArcGIS format, FGDC CSDGM style.
 - *Export* gives output as FGDC-CSDGM or ISO Standard xml.
 - *Synchronize* reads information out of the active data into the metadata record.
 - *Save as* creates standalone ArcGIS xml, with options to remove certain types of elements, or save the whole thing. Also can create nicely stylized html.



- ◆ The ArcGIS Pro editor does not close after Save. Best practice – Save after completing each subsection.
- ◆ Most of the required elements are in **Overview** and **Metadata** sections. It is perfectly acceptable to use additional elements. Don't forget to update them when the Item changes.

- ◆ The required elements list ends on page 9, and optional elements list is on page 10. The balance of this document provides help information in more detail: listed elements have [hyperlinks](#) to the help.
- ◆ Text below in **bold** shows Pro Metadata Editor headers. Stars ☆ indicate data entry points. Check marks ✓ indicate required entries that are captured automatically by synchronizing with the data. [Brackets] contain brief help information.

Required Elements

❖ Overview section

Item Description subsection

- ☆ [Title](#)
- ☆ [Tags](#) [Copy in all keywords after entry, described below]
- ☆ [Summary \(Purpose\)](#)
- ☆ [Description \(Abstract\)](#)
- ☆ [Credits](#) [Include all organizations to show on Item page]
- ☆ [Use Limitation](#) [Use Constraints and legalese for Distribution Liability.]
- ☆ ✓ [Bounding Box](#) [four bounding coordinates in signed decimal degrees]

Topics & Keywords subsection

- ☆ [Topic Category](#) [ISO Theme Keyword. Check on one; definitions are listed in [Appendix I: Topic Category definitions](#)]
- ☆ [Theme Keywords](#) [separate each word or phrase with a comma or with a line break]
- ☆ [Place Keywords](#) [Enter at least a fully qualified description of coverage area, e.g. *Trenton, Mercer County, New Jersey*]

Citation subsection

- ☆ [Title](#) [appears again here, no edit should be needed]
- ☆ Dates -> [Published](#) [Be sure to update [this date](#) when any change is made to data]

Citation Contacts subsection, first set of entries [Bring up forms for entries using Load a contact or New Contact]

- ☆ Organization
- ☆ Role [= [Originator](#)]

Citation Contacts subsection, second set of entries

- ☆ Organization
- ☆ Role [= [Publisher](#)]

❖ Metadata section

Details subsection

- ☆ [File Identifier](#) [change for each revision]
- ☆ [Date Stamp](#) [May fill in automatically; if not, should be changed.]
- ☆ [Language](#) [Pick from list]

Contacts subsection

- ☆ [Individual Name](#) [optional]
- ☆ [Organization Name](#)
- ☆ Role [=Point of Contact]

Contact Information sub-subsection

- ☆ Enter [full contact address information](#) (all fields)
- ☆ [Phone](#) [Include area code]

❖ **Resource section**

Details subsection

☆ Status

Extents subsection > **Resource Extent** **first set of entries** [repeatable]

Geographic Extent [was filled in above in Item Description. If not, go back there; filling it in here will not work correctly]

Extent subsection > ☆ **Resource Extent: create second set of entries**, for Time Period of Content [Add by using + New Extent button]

☆ Extent Description [Currentness Reference: enter Ground condition, Publication Date, or other description of how the dates relate to the data.]

☆ Temporal Period Extent

☆ Begin Date

☆ End Date

OR

☆ Temporal Instant Extent

☆ Date

Distribution subsection [Fill out only if the data are available outside of ArcGIS Online/ Open Data, and/or if there is a charge for the data. Details below in Optional section.]

Optional Elements

✦ For content that satisfies AGO validator and provides entries for Open Data Item interface, add the following:

❖ **Metadata** section

Maintenance subsection

- ☆ [Update Frequency](#) OR Custom Frequency [How often are the *metadata* updated?]

❖ **Resource** section

Extent subsection

- ☆ add **second** instance of Resource Extent for [Temporal Extent](#), even if the description is Publication Date. See above for Editor details.

Maintenance subsection

- ☆ [Update Frequency](#) OR Custom Frequency [How often are the *data* updated?]

✦ If the data are available outside of ArcGIS Online, and/or if there is a charge for the data, or if you want to add references to online sources for related information or data (e.g. your organization's web page,) add the following:

❖ **Resource** section, **Distribution** subsection

Distributor sub-subsection

- ☆ [Contact](#) [same format as Metadata Contact, but commonly different content]

Ordering Process within **Distributor**

- ☆ [Fees](#)
- ☆ [Monetary units](#)
- ☆ [Ordering Instructions](#)

Distribution Format within **Distributor**

- ☆ [Format Name](#) [Use a well-known entry if possible]
- ☆ [Format Version](#) [number or date]
- ☆ [Specification](#) [URL to format spec]
- ☆ [Information Content](#) [Explanation of the service type or file type in words]
- ☆ [Decompression Technique](#) [only if applicable]

Digital Transfer Options within **Distributor**

Online Resource within **Digital Transfer Options**

- ☆ [Linkage](#) [For service layer URL or AGO Item or direct download]
- ☆ [Function](#) [Pick from list if there is an appropriate entry]

Digital Transfer Options sub-subsection

Online Resource within **Digital Transfer Options**

- ☆ Linkage [For related web page or organization web page]
- ☆ Name [Of linkage target]
- ☆ Function

Appendix I: Topic Category definitions

ISO 19115 Topic Category codes¹: For all metadata records, include one of the following ISO Topic Category codes (text), which expresses the Primary Theme of the data set, map, service, or application. In the ArcGIS metadata, this entry is a check box. Numeric (three digit numbers as text) codes are provided for reference only.

- **Biota 002** for naturally-occurring flora and fauna, such as wildlife, biological sciences, ecology, wilderness, sea life, wetlands, habitats
- **Boundaries 003** for administrative and political boundaries, i.e. legal land descriptions
- **climatologyMeteorologyAtmosphere 004** for atmospheric processes and phenomena, such as cloud cover, weather, atmospheric conditions, climate change, precipitation
- **economy 005** for economic activities or employment, such as labor, revenue, commerce, industry, tourism, ecotourism, forestry, fisheries, commercial or subsistence hunting, exploration and exploitation of minerals, oil, gas
- **elevation 006** for height above or below sea level, such as altitude, bathymetry, digital elevation models, slope, and products derived from the preceding
- **environment 007** for environmental resources, protection, and conservation, such as pollution, waste storage and treatment, environmental impact assessment, environmental risk, and nature reserves
- **farming 001** for agriculture and farming, including the rearing of animals or cultivation of plants. For example, irrigation, aquaculture, herding, pests and diseases affecting crops and livestock
- **geoscientificInformation 008** for geological, geophysical, and other earth science information, such as minerals, rock structure, rock composition, rock origin, earthquakes, volcanic activity, landslides, gravity, soils, permafrost, hydrogeology, erosion
- **health 009** for human health and disease, health services, human ecology, and safety, such as human disease, human illness, factors affecting health, hygiene, mental and physical health, substance abuse
- **imageryBaseMapsEarthCover 010** for base maps, such as land cover, topographic maps, classified and unclassified images.
- **intelligenceMilitary 011** for military bases, structures, and activities, such as barracks, training grounds, military transportation, military information collection
- **inlandWaters 012** for inland water features and drainage systems, such as rivers, glaciers, salt lakes, water use plans, dams, currents, floods, water quality, hydrographic charts
- **location 013** for positional information and services, such as addresses, geodetic networks, postal zones and services, control points, place names

¹ Derived from *ISO Draft International Standard: Geographic information -- Metadata (ISO/DIS 19115), 2001, Section B.5.27 MD_TopicCategoryCode<<CodeList>>* (pp. 85-86) and *Creating and Using Metadata Services, 2002, ESRI, Chapter 4 - Publishing metadata in ArcCatalog*. Numeric domain codes are from https://geo-ide.noaa.gov/wiki/index.php?title=ISO_Topic_Categories.

- **oceans 014** for features and characteristics of salt water bodies excluding inland waters, such as tides, tidal waves, coastal information, reefs
- **planningCadastre 015** for land use, such as zoning maps, cadastral surveys, land ownership
- **society 016** for characteristics of societies and cultures, such as natural settlements, anthropology, archaeology, education, traditional beliefs, manners and customs, demographic data, crime and justice, recreational areas and activities, social impact assessments, census information
- **structure 017** for man-made construction, such as buildings, museums, churches, factories, housing, monuments, and towers
- **transportation 018** for transportation networks, the means and aids for conveying people and goods, such as roads, airports, airstrips, shipping routes, tunnels, nautical charts, vehicle or vessel location, aeronautical charts, railways
- **utilitiesCommunication 019** for energy, water, and waste systems, and communications infrastructure and services, such as hydroelectricity, geothermal, solar, and nuclear sources of energy, water purification and distribution, sewage collection and disposal, electricity and gas distribution, data communication, telecommunication, radio, and communication networks.
- **extraTerrestrial** for region more than 100 km above the surface of the Earth
- **disaster** for information related to disasters. Examples: site of the disaster, evacuation zone, disaster-prevention facility, disaster relief activities.

Appendix II: Detailed Help

ArcGIS field and (CSDGM element)	Required	Pro Editor location	Notes
Title	Y	Overview > Item Description > Title	This will show up in search results. Include enough information to distinguish from other entries. <i>Alternate Title</i> field can be used for a well-known abbreviation or file name. Here is an example of a good Title: <i>Congressional District Boundaries for the State of New Jersey, 2012 - 2022; unofficial, nj_munis - based</i>
Publication Date	Y	Overview > Item Description > Date > Published	This date is required. Change the Publication Date of the item every time there is a discrete update.
(Citation Information > Online Linkage)	Opt	Resource > Distribution > Digital Transfer Options > Online Resource > Linkage	Add URL to more information about the data and / the responsible organization. Also good to fill out Description and Function, although these will not display in FGDC stylesheet in AGO.
Citation Contact Originator (Originator)	Y	Overview > Citation Contacts > Contact > Organization AND Role = Originator	Party responsible for defining the data set. A fully-qualified name should be used, starting with the main organizational unit and specifying down the hierarchy, followed by any well-known abbreviation. Example: NJ Department of Environmental Protection, Division of Information Technology, Bureau of Geographic Information Systems (NJDEP - DOIT - BGIS).
Citation Contact Publisher (Publisher)	.	Overview > Citation Contacts > Contact > Organization AND Role = Publisher	Party responsible for making the data set available. Use same format as for Originator. Also put in Credits if different from Originator.
Description (Abstract)	Y	Overview > Item Description > Description (Abstract)	Should be understandable to intelligent general reader, and convey the subject of the data set as well as other key information to help a potential user to assess it.
Summary (Purpose)	Y	Overview > Item Description > Summary (Purpose)	Business reason why the data were created, and/or anticipated suitable uses for the data.
Credits	Y	Overview > Item Description > Credits	Include (copy in) the Originator, add the Publisher if different, and add any other contributors of funding or work. This entry is displayed prominently in AGO Item.

ArcGIS field and (CSDGM element)	Required	Pro Editor location	Notes
Status (Progress)	Y	Resource > Details > Status	<i>Complete</i> if data set covers all the intended area & time, even if updates are ongoing; <i>In Work</i> if published as a partially-completed release; <i>Planned</i> if contemplated, or in-progress but not published yet.
Topic Category (ISO Theme Keyword)	Y	Overview > Topics and Keywords > Topic Categories	Check on one, or if necessary, two. Definitions are provided in Appendix I.
Tags	Y	Overview > Item Description > Tags	Will contain any tags entered when first editing the metadata. Copy in all other keywords you have added. Separate with commas or line breaks.
Theme Keywords	Opt	Overview > Topics and Keywords > Theme Keywords	List other subject keywords or phrases that others might use to search for the data. Separate with line breaks.
Place Keyword	Y	Overview > Topics and Keywords > Place Keywords	List keywords or phrases that might be used to search for the data. The first word or phrase should fully specify the geographic location: e.g., <i>Trenton, Mercer County, New Jersey</i> .
Bounding Box (Bounding Coordinates) (4)	Y	Overview > Item Description > Bounding Box	Each of four geographic coordinates is in signed decimal degrees; sign included only for negative. Sync with data will fill in automatically. If created manually, must be done in the Overview > Item Description section of the editor, not in Resource > Extents, although the entry will show up there too. Check in Pro metadata display – it should be labelled Bounding rectangle, and Extent used for searching. (“searching” does not show up in the editor, only in the stylesheet.)
Temporal Extent (Time Period of Content) Date(s)	Y, only required if different from Publication Date	Resource > Extents > Temporal Period Extent > Begin Date/Time AND End Date/Time; OR Temporal Instant Extent > Date/Time	Do not add this information to the same resource extent that describes the Geographic Extent (Bounding Box.) Create a new Extent section. For example, if the data were captured by a sensor in July, but not processed and published until September, an Extent should be used to specify the capture date(s). If you need to express a range, use Temporal Period Extent > Begin Date and > End Date . If you need to express multiple specific dates, use multiple instances of Temporal Instant Extent > Date . Optional for minimal metadata if the data content date would be described as publication date.

ArcGIS field and (CSDGM element)	Required	Pro Editor location	Notes
Temporal Extent Description (Time Period of Content Currentness Reference)	Y, only required if different from Publication Date	Resource > Extents > Extent Description	<p>Fill this in for the same Resource Extent as the Temporal date(s.) Enter <i>Ground Condition</i> or another phrase, explaining how the time period of content relates to the data. If you know when the data matched the real world, use <i>Ground Condition</i>.</p> <p>Required by AGO validator</p> <p>Not needed for Geographic Extent (Bounding Box)</p>
Update Frequency (Maintenance and Update Frequency)	Opt	Resource > Maintenance > Update Frequency OR Custom Frequency	<p>Please use <i>As Needed</i> only if there is a structured routine in place for change detection and update. Otherwise one of, <i>Irregular</i>, <i>Unknown</i>, or <i>Not Planned</i> is more appropriate.</p> <p>Required by AGO validator.</p>
Use Limitation (Use Constraints)	Y	Resource > Constraints > General Constraints > Use Limitation	<p>Identical to Overview > Item Description > Use Limitation. No edits needed if filled in there. Enter limitations on use, requests or requirements for attribution, and any legal disclaimer required by your organization. For public data, suggested language that does not conflict with the NJ Open Public Records Act is in MD_AGOL_Item_help.pdf, Section II. Contents will be displayed prominently in AGO Items.</p>
Distribution (Distribution Information)	Opt. If used, all listed under Distribution should be used.	Resource > Distribution > ...	<p>Needed only for Items distributed outside of ArcGIS Online/Open Data.</p>

Linkage	Opt	Resource > Distribution > Distributor > Digital Transfer Options > Online Resource > Linkage	Preferably, an actionable internet address for the resource, such as a direct download or REST service endpoint. Alternatively, URL for the AGO Item.
Function	Opt	Resource > Distribution > Distributor > Digital Transfer Options > Online Resource > Function	For downloadable data, catalog access, etc; leave empty if nothing matches, e.g for live services.
Format Name	Opt	Resource > Distribution > Distributor > Distribution Format > Format Name	e.g. Esri map service - ArcREST; Shapefile; WMS; File geodatabase; Cached map tiles; Streamed features; etc.
Format Version	Opt	Resource > Distribution > Distributor > Distribution Format > Format Version	Enter a software version number or a date. If using a date, format as follows: 2019-04-08.
Specification	Opt	Resource > Distribution > Distributor > Distribution Format > Specification	URL to formal format specification. E.g. for shapefile: https://www.esri.com/library/whitepapers/pdfs/shapefile.pdf
Information Content	Opt	Resource > Distribution > Distributor > Distribution Format > Information Content	Verbal description of information delivered by the format. E.g. for shapefile: Nontopological geometry and attribute information for the spatial features in a data set.
Decompression Technique	Opt	Resource > Distribution > Distributor > Distribution Format > Decompression Technique	Name and specification for compression, only if applicable. E.g. for zip: ZIP; https://pkware.cachefly.net/webdocs/casestudies/APPNOTE.TXT
Distributor Contact	Opt	Resource > Distribution > Distributor > Contact > ...	Except for role, same instructions as for filling in Metadata Contact , except that an individual name rarely is appropriate. Organization and Contact Information may be different from the Metadata Contact.

Fees	Opt	Resource > Distribution > Distributor > Ordering Process > Fees	If no charge, enter 0.00.
Monetary Units	Opt	Resource > Distribution > Distributor > Ordering Process > Monetary Units	Select correct units from list, e.g. "US Dollar." Required even if Fee is 0.00.
Ordering Instructions	Opt	Distribution > Distributor > Ordering Process > Ordering Instructions	Verbal description of how to obtain access to the data or service.
Metadata Date	Y	Metadata > Details > Date Stamp	May autopopulate. Change, manually if necessary, whenever the metadata are changed.
File Identifier	Opt	Metadata > Details > File Identifier	Automatic entry (button). If metadata are downloaded for re-use, delete the entry in the copy and replace it; in ArcGIS metadata xml, located at /metadata/mdFileID
Metadata Language	Y	Metadata > Details > Language	Pick from list.
Metadata Contact Individual Name (Person)	Y	Metadata > Contacts > Contact Name	Should be the name of someone who can answer questions about the metadata and the Item; or stable group contact information (see below)
Metadata Contact Organization Name	Y	Metadata > Contacts > Contact Organization Name AND Role = Point of Contact	Structure this the same way as Originator (see above), although it may very well be a different organization.
Metadata Contact Email (Electronic Mail Address)	Y	Metadata > Contacts > Contact Information > Email	
Metadata Contact Address Type	Y	Metadata > Contacts > Contact Information > Address type	For NJ State addresses, usually has to be postal OR physical, because the two zip codes are not the same.
Metadata Contact Delivery Point (Address)	Y	Metadata > Contacts > Contact Information > Address	Use only PO Box OR street address.

Metadata Contact City	Y	Metadata > Contacts > Contact Information > City	Postal City
Metadata Contact Administrative Area (State or Province)	Y	Metadata > Contacts > Contact Information > State	Two-letter abbreviation may be used.
Metadata Contact Postal Code	Y	Metadata > Contacts > Contact Information > Postal Code	Zip code
Metadata Contact Country	Y	Metadata > Contacts > Contact Information > Country	Pick from list.
Metadata Contact Voice Telephone	Y	Metadata > Contacts > Contact Information > Phone	Include area code.

Version History

Version 2.2 Minor editorial updates and a few optional elements added.

Version 2.1 Updated and edited for use with ArcGIS Pro

Version 1.1: Removed entries that are no longer required by the AGOL validator. Added fuller optional Distribution Information. Other minor editorial changes.