Alabama State Port Authority

Port of Mobile

ASPA Metadata Standards

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Purpose

Client	ASPA
Subject	Organizational Metadata Standards
Author	NorthSouth GIS LLC

Introduction

The main governing body for the definition of metadata in the United States is the Federal Geographic Data Committee (FGDC); they describe metadata as follows:

> "A metadata record is a file of information, usually presented as an XML document, which captures the basic characteristics of a data or information resource. It represents the who, what, when, where, why and how of the resource. Geospatial metadata are used to document geographic digital resources such as Geographic Information System (GIS) files, geospatial databases, and earth imagery. A geospatial metadata record includes core library catalog elements such as Title, Abstract, and Publication Date; geographic elements such as Geographic Extent and Projection Information; and database elements such as Attribute Label Definitions and Attribute Domain Values."

The creation and maintenance of metadata benefits ASPA by providing information on the quality and heritage of the Port's geospatial data, but also serves the same purpose with data provided by 3rd-party contractors, and other associated outside organizations. Metadata can also serve to document historical information concerning each data set and some see it as the mark of maturity of an organization's GIS and data management efforts. This document covers guidelines and requirements for ASPA metadata standards.

Purpose and Standards

To support this outcome, ASPA has adopted the Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata (CSDGM) as a basis to follow when documenting geospatial data sets. To facilitate the implementation of this standard, this document stands as the required metadata standard, a subset of the FGDC CSDGM, that is recognized as the approved implementation pathway toward high quality GIS data documentation.

This standard applies to all geospatial datasets developed internally by the Port and geospatial datasets delivered to the Port by external parties. The standard described herein represents the minimum level of documentation required for all geospatial datasets.

Esri ArcGIS software shall be used to create and maintain FGDC CSDGM metadata using the ArcGIS Metadata Style 'FGDC CSDGM Metadata'.

Refer to the related ASPA Geospatial Data Delivery Standards document for more information on geospatial data and delivery requirements.

Metadata Elements Exemptions

Many metadata elements are automatically generated and updated when using ArcGIS software or may be elements that are difficult to accurately describe for some dataset formats. *These elements have been noted in the Metadata Standard for possible Exemption based on the dataset format, agency and/or capturing method with an asterisk next to the Element Number.*

Exemption requests from these elements must be submitted to the ASPA Sr. GIS Specialist at GIS@alports.com for approval before delivery.

Metadata Standards

Table 1 below documents each element in the FGDC metadata, its definition and reference back to the FGDC Hierarchy. For Elements 14 & 15 (Data Originator & Data Point of Contact), Elements 40 through 48 are also required.

The Elements 36 & 37 (Attribute Definition and Attribute Definition Source) and one of the following (Elements 38.1a and 38.1b, 38.2a and 38.2b, 38.3a and 38.3b or 38.4) are required for all fields in the data attribute table except the identification number field (e.g., OBJECTID) and SHAPE field(s).

Table 1 below gives an example of sample metadata for each element to use as reference.

Table 1 - ASPA Metadata Elements

Element Number	Element Name	Definition	FGDC Hierarchy Reference
1	Title	The name by which the cited resource is known. Data type: Text. From: ISO 19115:2003.	8.4
2	Tags	A set of terms that can be used by GIS to search for the resource. Terms should be provided as a comma-separated list. Data type: Text. From: ArcGIS metadata.	1.6.1.2
3	Summary (Purpose)	A summary of the intentions with which the resource was developed. Data type: Text. From: ISO 19115.	1.2.2
4	Description (Abstract)	A brief narrative summary of the resource's content. Data type: Text. From: ISO 19115.	1.2.1
5	Credits	A recognition of those who created or contributed to the resource. Data type: Text. From: ISO 19115	1.1.1

Element Number	Element Name	Definition	FGDC Hierarchy Reference
6	Use Limitation	Describes limitations affecting the fitness of use of the resource. Data type: Text. From: ISO 19115:2003.	1.8
7*	West Bounding Coordinate	Western-most coordinate of the limit of coverage expressed in longitude. Domain: -180.0 <= West Bounding Coordinate < 180.0	1.5.1.1
8*	East Bounding Coordinate	Eastern-most coordinate of the limit of coverage expressed in longitude. Domain: -180.0 <= East Bounding Coordinate < 180.0	1.5.1.2
9*	North Bounding Coordinate	Northern-most coordinate of the limit of coverage expressed in latitude. Domain: -90.0 <= North Bounding Coordinate <= 90.0; North Bounding Coordinate >= South Bounding Coordinate	1.5.1.3
10*	South Bounding Coordinate	Southern-most coordinate of the limit of coverage expressed in latitude. Domain: -90.0 <= South Bounding Coordinate <= 90.0: South Bounding Coordinate <= North Bounding Coordinate	1.5.1.4
11	Topic Categories	Identifies the primary themes associated with the resource's content. Data type: Code. From: ISO 19115:2003	1.6.1.2
12	Place Keywords	Keywords that associate the resource with a location. Data type: Text. From: ISO 19115:2003.	1.6.2.1
13	Dates	The dates when the cited resource was created and published; note if they are different. Data type: Date. From: ISO 19115:2003.	8.2
14	Data Originator	The name of organization or individual that developed the dataset. Data type: Text. From: ISO 19115:2003.	8.1
15	Data Point of Contact	The name of organization or individual that is the current point of contact. Data type: Text. From: ISO 19115:2003.	1.9
16*	Metadata Update Frequency	The frequency with which the metadata is updated. Data type: Text. From: ISO 19115.2003.	1.4.2
17	Status	The status of the resource. Data type: domain ("Complete" "In Work" "Planned") From: ISO 19115.	1.4.1
18	Credit	A recognition of those who created or contributed to the resource. Data type: Text. From: ISO 19115.	1.11
19	Data Update Frequency	The frequency with which the resource is updated. Data type: Code. From: ISO 19115.2003.	1.4.2
20*	Next Update *Only required if the Update Frequency is set to a specific time frame.	The scheduled revision date. Data type: Date. From: ISO 19115.2003.	
21	Access Constraints	Restrictions and legal prerequisites for using the dataset after access is granted. Data type: Text. From: ISO 19115:2003.	1.7

Element Number	Element Name	Definition	FGDC Hierarchy Reference
22	Supplemental Information *Only add if data includes Z information	Information regarding the vertical datum.	
23*	State Plane Coordinate System	A plane-rectangular coordinate system established for each state in the United States by the National Geodetic Survey.	4.1.2.2.4
24*	SPCS Zone Identifier	Identifier for the SPCS zone. Domain: Four-digit numeric code for the State Plane Coordinate Systems based on the North American Datum of 1983 are found in Department of Commerce, 1986, Representation of geographic point locations for information interchange	4.1.2.2.4.1
25*	Horizontal Datum Name	The identification given to the reference system used for defining the coordinates of points. Domain: "North American Datum of 1983" free text	4.1.4.1
26	Lineage	Information about the events, parameters, and source data which constructed the dataset, and information about the responsible parties.	2.5
27	Data Source Description	A detailed description of the source. Domain: free text	
28	Data Source Citation Title	The name by which the cited resource is known. Domain: free text	
29	Data Source Date	The date when the cited resource was created. Domain: date	
30	Data Source Contact	The name of a person associated with the resource. Domain: free text	
31	Process Step Description	Describes the event, transformation, or process that occurred while maintaining the resource, including any parameters or tolerances that were used. Domain: free text	
32	Process Step Date	Identifies the date and time when the process step occurred. Domain: free text	
33	Entity Type Definition	The definition of the entity type. Domain: free text	5.1.1.2
34	Entity Type Definition Source	The authority that provided the definition. Domain: free text	5.1.1.3
35*	Attribute Label	The name of the attribute. Domain: free text	5.1.2.1
36	Attribute Definition	The description of the attribute. Domain: free text	5.1.2.2
37	Attribute Definition Source	The authority that provided the definition. Domain: free text	5.1.2.3
38	Attribute Domain Value	One of the following (47.1a and 47.1b, 47.2a and 47.2b, 47.3a and 47.3b or 47.4) is required for each attribute field.	5.1.2.4.1
38.1a	Enumerated Domain Value	The name or label of a member of the set. If this is a published standard codeset, such as USGS Digital Line Graph codes or FIPS codes, use the 'Codeset Domain' instead.	5.1.2.4.1.1
38.1b	Enumerated Domain Value Definition	Description of the value. Domain: free text	5.1.2.4.1.2
38.2a	Range Domain Minimum	The least value that the attribute can be assigned. Domain: free text	5.1.2.4.2.1

Element Number	Element Name	Definition	FGDC Hierarchy Reference
38.2b	Range Domain Maximum	The greatest value that the attribute can be assigned. Domain: free text	5.1.2.4.2.2
38.3a	Codeset Domain Name	Any published codeset, such as USGS Digital Line Graph codes or FIPS codes. Domain: free text	5.1.2.4.3.1
38.3b	Codeset Domain Source	Source of published codeset. Domain: free text	5.1.2.4.3.2
38.4	Unrepresentable Domain	Any value that is not or cannot be prescribed. For example, names. Domain: free text	5.1.2.4.4.1
39	Contact Person	The name of the individual to which the contact type applies. Domain: free text	10.1.1
40	Contact Organization	The name of the organization to which the contact type applies. Domain: free text	10.1.2
41	Contact Position	The title of the individual. Domain: free text	10.3
42	Contact Address	The address for the organization or individual. Domain: free text	10.4
43	Address Type	The information provided by the address. Domain: "Mailing Address" "Physical Address" "Mailing and Physical Address"	10.4.1
44	City	The city of the address. Domain: free text	10.4.3
45	State or Province	The state or province of the address. Domain: free text	10.4.4
46	Postal Code	The ZIP or other postal code of the address. Domain: free text	10.4.5
47	Contact Telephone	The telephone number by which individuals can speak to the organization or the individual. Domain: free text	10.5
48	Contact Email	The address of the electronic mailbox of the organization or individual. Domain: free text	10.8

* Possible exemption based on the dataset format, agency and/or capturing method.

Table 2 - ASPA Metadata Guidance Example (excluding software generated elements)

Name	Description	Example
Title	The informal name of the dataset. E.g., the data file may be called something like 'UBWL22', but the title should be easy to understand.	Upper Bay Wetlands Areas
Tags	A set of terms that can be used by the GIS to search for the resource.	wetlands port stewardship
Summary (Purpose)	A simple summary of the intentions with which the resource was developed.	This data was created for the purpose of the planning, developing, and managing the Upper Mobile Bay Beneficial Use Wetland Creation Site
Description (Abstract)	A brief narrative summary of the resource's content.	Project areas have been created to aid in the planning, development, and management of the Upper Mobile Bay Wetlands project, a 1,200-acre area of wetlands created through the beneficial use of dredge sediments.
Credits	Recognition of those who created or contributed to the resource. This can be fairly general (e.g., 'Port of Mobile')	Port of Mobile Environmental Department

Name	Description	Example
	and gives a quick identification to the source of the data.	
Use Limitation	Describes limitations affecting the fitness of use of the resource; for example, "Not to be used for navigation."	For planning and management purposes only.
Topic Categories	Identifies the primary themes associated with the resource's content.	Boundaries Environment Geoscientific
Place Keywords	Keywords that associate the resource with a location.	Port of Mobile City of Mobile Upper Middle Bay Wetlands Theodore Mobile County
Dates	The date when the cited resource was created, published and/or revised. In most cases for the Port of Mobile, the Date Created and the Date Published are the same. Revision date should only be updated when broad changes are made, such as a fresh version of assessor parcels is received and replaces the existing data.	Created: 2023-04-20 Published: 2023-04-20 Revised: <null>
Contact (originator)	All data must have a contact for the originator.	Zheng Droneguy
Contact (point of contact)	All data must have a point of contact indicated, even if it is the same person as the originator.	Shandra Contactlady
Update Frequency	The frequency with which the metadata is updated. Continual Daily, Weekly, Fortnightly, Monthly, Quarterly, Biannually, Annually, As Needed, Irregular, Other. If other, enter custom frequency. E.g., 45 days.	Monthly
Status	The status of the resource. Completed Historical Archive, Obsolete, On Going, Planned, Required Under Development. In general, this should be set to 'Completed', unless the data is truly in a state of development, archived, etc.	On Going
Credit	A recognition of those who created or contributed to the resource.	Port of Mobile Environmental Department
Supplemental Information (Vertical Datum*) *Only add if data includes Z information	Information regarding the vertical datum. Note that this section may be used to include other information, but if the data contains Z values, it must include information about the vertical datum.	

Name	Description	Example
Update Frequency	The frequency with which the data is updated. Continual, Daily, Weekly, Fortnightly, Monthly, Quarterly, Biannually, Annually, As Needed, Irregular, Other. If other, enter custom frequency. E.g., 45 days.	Monthly
Legal Constraints	Describes legal limitations affecting the use of the resource.	This digital data and metadata, (hereinafter collectively referred to as the "information"), are provided on an "AS IS", "AS AVAILABLE" and "WITH ALL FAULTS" basis.
For each process that occurred to build, update and/or maintain the data, the Data Source and Process Step values must be created.		
Data Source Description	A detailed description of the source.	Port of Mobile Environmental Department's UAV imagery and site inspection reports.
Data Source Citation Title	The name by which the cited resource is known.	UAV areal imagery Site Inspection reports
Data Source Date	The date when the cited resource was created.	Date: 2023-04-20
Data Source Contact	The name of a person associated with the resource.	Shandra Contactlady
Process Step Description	Describes the event, transformation, or process that occurred while maintaining the resource, including any parameters or tolerances that were used.	Dredge sediment deposit areas added to developing wetland polygons as indicated by UAV areal imagery and site inspection reporting. Fixed a few minor topology errors. Imported working FGDB polygon into Enterprise Geodatabase.
Process Step Date	Identifies the date and time when the process step occurred.	Date: 2023-04-20
Entity Type Definition	A description of the features, objects, or cells contained by the dataset.	Each added area date of deposition.
Entity Type Definition Source	The authority that provided the definition.	Shandra Contactlady
Note: Attribute Definition and Attribute Definition Source are required for all fields in the data attribute table except the identification number field (e.g., OBJECTID) and SHAPE field(s).		
Attribute Definition	The description of the attribute.	Date of deposition
Attribute Definition Source	The authority that provided the definition.	Shandra Contactlady
Enumerated Domain Value	An example value or code of a member of the set. Note: If this is a published standard codeset, such as FIPS codes, use the 'Codeset Domain' instead.	2023-02-10
Enumerated Domain Value Definition	A description of the value or code stored in this field.	Vitreous clay pipe
Range Domain Minimum	The least value that can be stored in the field.	-15
Range Domain Maximum	The greatest value that can be stored in the field.	100

Name	Description	Example
Codeset Domain Name	If the enumerated or coded values stored in the field are specified by an authority, provide the title for this set of values.	FIPS
Codeset Domain Source	The authority that defined the set of values stored in this field.	NIST
Unrepresentable Domain	Characterizes the values stored in this field in a manner that illustrates why they can't be described as an enumerated, codeset, or range domain. For example, explain how the field's unique values are calculated.	Unique sediment deposit environmental monitoring sample site result.
Contact Organization	Organization name	Alabama State Port Authority
Contact Position	The title of the individual.	Sr. GIS Specialist
Contact Address	The address for the organization or individual.	P.O. Box 1588
Address Type	The information provided by the address, e.g., "Mailing Address" "Physical Address" "Mailing and Physical Address"	Mailing Address
City	The city of the address	Mobile
State or Province	The state or province of the address. Domain: free text	Alabama
Postal Code	The ZIP or other postal code of the address. Domain: free text	36633-1588
Contact Telephone	The telephone number by which individuals can speak to the organization or the individual. Domain: free text	251.123.1234
Contact Email	The address of the electronic mailbox of the organization or individual. Domain: free text	Shandra.Contactlady@alports.com