## USGIN ISO 19139 Minimum Dataset Metadata

In the following listing, text in green is comments; XML elements are in blue, XML attributes are in black, and attribute values are in purple.

<?xml version="1.0" encoding="UTF-8"?>

<!--\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\*\*\* Minimum example of a ISO 19139 Geospatial Dataset Metadata

\*\*\* based on the USGIN v1.2 Profile

\*\*\* by USGIN Standards and Protocols Drafting Team

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\*\*\* DISCLAIMER: this is not an authoritative metadata example but an aide to get started.

\*\*\* Refer to the USGIN profile document for more specific and complete guidelines.

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\*\*\* Validated against http://www.isotc211.org/2005/gmd (ISO 19115, CSW 2.0.2 AP ISO 1.0).

\*\*\* Follows the USGIN ISO 19139 Dataset Metadata Profile v1.2.

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\*\*\* NOTES:

\*\*\* - Codelists:

\*\*\* Most ISO metadata profiles and applications use ISO codelists or codelists that use ISO's codelist names.

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\*\*\* - Language code:

\*\*\* Use ISO <ISO639-2/T three letter language code - lower case> formatting.

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\*\*\* KEY: (NAP-USGIN) - M/C/O/X (Mandatory, Conditional, Optional, Not Used)

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<!-- USGIN ISO 19139 geospatial dataset metadata record -->

<gmd:MD\_Metadata

xmlns:gmd="http://www.isotc211.org/2005/gmd"

xmlns:gco="http://www.isotc211.org/2005/gco"

xmlns:gml="http://www.opengis.net/gml"

xmlns:xlink="http://www.w3.org/1999/xlink"

xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="http://www.isotc211.org/2005/gmd http://schemas.opengis.net/csw/2.0.2/profiles/apiso/1.0.0/apiso.xsd">

<!-- (M-M) Metadata file identifier - A unique File Identifier (GUID) - USGIN recommends using a valid Universally Unique Identifier (UUID) -->

<gmd:fileIdentifier>

<gco:CharacterString>08fb00c8-0882-4bf7-b07f-fd37050c5efc</gco:CharacterString>

</gmd:fileIdentifier>

<!-- (M-M) Metadata language - ISO <ISO639-2/T three letter language code - lower case> formatting. -->

<gmd:language>

<gco:CharacterString>eng</gco:CharacterString>

</gmd:language>

<!-- (M-M) Metadata character set - USGIN requires that a character set code is defined to facilitate CSW servers (deegree, GeoNetwork, etc.). -->

<gmd:characterSet>

<!-- MD\_CharacterSetCode names: {ucs2, ucs4, utf7, utf8, utf16, 8859part1, 8859part2, 8859part3, 8859part4, 8859part5, 8859part6, 8859part7, 8859part8, 8859part9, 8859part10, 8859part11, 8859part13, 8859part14, 8859part15, 8859part16, jis, shiftJIS, eucJP, usAscii, ebcdic, eucKR, big5, GB2312} -->

<gmd:MD\_CharacterSetCode

codeList="http://www.isotc211.org/2005/resources/Codelist/gmxCodelists.xml#MD\_CharacterSetCode"

codeListValue="utf8">UTF-8</gmd:MD\_CharacterSetCode>

</gmd:characterSet>

<!-- (M-M) Resource type - Define if this record is a: dataset (default), service, feature, software, etc. -->

<gmd:hierarchyLevel>

<!-- MD\_ScopeCode code names: {attribute, attributeType, collectionHardware, collectionSession, dataset, series, nonGeographicDataset, dimensionGroup, feature, featureType, propertyType, fieldSession, software, service, model, tile}. -->

<gmd:MD\_ScopeCode

codeList="http://www.isotc211.org/2005/resources/Codelist/gmxCodelists.xml#MD\_ScopeCode"

codeListValue="dataset">dataset</gmd:MD\_ScopeCode>

</gmd:hierarchyLevel>

<!-- (O-M) Resource hierarchy level name - USGIN makes this property mandatory to identify the USGIN resource type (see USGIN Profile, "Resources of Interest"). Default CharacterString is “Dataset” Encode hierarchy by including hierarchyLevelName elements for all broader resource categories. E.g. default should also include a hierarchyLevelName=”Collection” element. For services USGIN hierarchyLevelName/CharacterString is “Service”. -->

<gmd:hierarchyLevelName>

<gco:CharacterString>Dataset</gco:CharacterString>

</gmd:hierarchyLevelName>

<gmd:hierarchyLevelName>

<gco:CharacterString>Collection</gco:CharacterString>

</gmd:hierarchyLevelName>

<!-- (M-M) Metadata point of contact - Point of contact for the metadata record, e.g. for users to report errors, updates to metadata, etc. -->

<gmd:contact>

<gmd:CI\_ResponsibleParty>

<!-- (M-M) (individualName + organisationName + positionName) > 0 -->

<!-- only one is mandatory, this example has organisationName -->

<gmd:organisationName>

<gco:CharacterString>Arizona Geological Survey</gco:CharacterString>

</gmd:organisationName>

<!-- Metadata contact information, either a phone number or e-mail address is required.

This example has an e-mail address. ISO19115 makes contact role mandatory as well. -->

<gmd:contactInfo>

<gmd:CI\_Contact>

<gmd:address>

<gmd:CI\_Address>

<!-- (O-M) Metadata point of contact e-mail address to meet profile requirement -->

<gmd:electronicMailAddress>

<gco:CharacterString>metadata@azgs.az.gov</gco:CharacterString>

</gmd:electronicMailAddress>

</gmd:CI\_Address>

</gmd:address>

</gmd:CI\_Contact>

</gmd:contactInfo>

<!-- (M-M) ISO 19139 Mandatory: contact role -->

<gmd:role>

<!-- CI\_RoleCode names: {resourceProvider, custodian, owner, user, distributor, originator, pointOfContact, principalInvestigator, processor, publisher, author} -->

<gmd:CI\_RoleCode

codeList="http://www.isotc211.org/2005/resources/Codelist/gmxCodelists.xml#CI\_RoleCode"

codeListValue="pointOfContact">point of contact</gmd:CI\_RoleCode>

</gmd:role>

</gmd:CI\_ResponsibleParty>

</gmd:contact>

<!-- (M-M) Metadata date stamp - USGIN profile requires use of dateStamp/gco:DateTime (Note this contrasts with INSPIRE mandate to use dateStamp/gco:Date). This is the date and time when the metadata record was created or most recently updated (following NAP). -->

<gmd:dateStamp>

<!-- Requires an extended ISO 8601 formatted combined UTC date and time string (YYYY-MM-DDTHH:MM:SS) Some validators require time zone as well; recommend using GMT indicated by

'Z' -->

<gco:DateTime>2010-01-14T10:00:00Z</gco:DateTime>

</gmd:dateStamp>

<!-- (M-M) metadata standard - USGIN profile conformant metadata is indicated by the string “ISO-USGIN" -->

<gmd:metadataStandardName>

<gco:CharacterString>ISO-USGIN</gco:CharacterString>

</gmd:metadataStandardName>

<!-- (O-M) USGIN profile version -->

<gmd:metadataStandardVersion>

<gco:CharacterString>1.2</gco:CharacterString>

</gmd:metadataStandardVersion>

<!-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* -->

<!-- (M-M) Resource identification information - At least one of MD\_DataIdentification (dataset, dataset series) or SV\_ServiceIdentification (service) is required. -->

<gmd:identificationInfo>

<!-- Resource Dataset or Dataset Series Identification -->

<gmd:MD\_DataIdentification>

<!-- (M-M) Resource citation - Information to identify the intellectual origin of the content in the described resource, along the lines of a citation in a scientific journal. Required content for a CI\_Citation element are title, date, and responsibleParty. If the subject of the metadata record is derived from other sources, such that it is not considered identical with those sources, the provenance should be documented in LI\_Lineage//LI\_Source elements. -->

<gmd:citation>

<gmd:CI\_Citation>

<!-- (M-M) Resource title - Use titles that inform the human reader about the dataset’s content; titles should be unique in the context of the metadata catalog that contains the metadata record. -->

<gmd:title>

<gco:CharacterString>USGIN minimum metadata example XML file.</gco:CharacterString>

</gmd:title>

<!-- (M-M) Resource reference date - Best practice is to include at least the date of publication or creation of the resource. The date of the resource reported in the citation corresponds to the resource’s last update version according to its update frequency. CI\_Date content includes a date and dateType. Date for USGIN profile uses gco:DateTime. -->

<gmd:date>

<gmd:CI\_Date>

<gmd:date>

<!-- Requires an extended ISO 8601 UTC date and time string (YYYY-MM-DDTHH:MM:SS) Some validators require time zone as well; recommend GMT indicated by 'Z' -->

<gco:DateTime>2010-01-14T09:30:47Z</gco:DateTime>

</gmd:date>

<!-- dateType is mandatory per ISO19115 -->

<gmd:dateType>

<!-- CI\_DateTypeCode names: {creation, publication, revision}. -->

<gmd:CI\_DateTypeCode

codeList="http://www.isotc211.org/2005/resources/Codelist/gmxCodelists.xml#CI\_DateTypeCode"

codeListValue="publication">publication</gmd:CI\_DateTypeCode>

</gmd:dateType>

</gmd:CI\_Date>

</gmd:date>

<!-- (M-M) Resource responsible party - The citation attribute provides information for citing the intellectual origin of the described resource, analogous to a citation in a scientific journal. The citedResponsibleParty should specify the individual(s) and organizations responsible for the creation or origination of the resource. For most intellectual content, the responsible party is what would normally be considered the author of a work. -->

<gmd:citedResponsibleParty>

<gmd:CI\_ResponsibleParty>

<!-- (M-M) (individualName + organisationName + positionName) > 0 -->

<!-- only one is mandatory, this example has organisationName -->

<gmd:organisationName>

<gco:CharacterString>Arizona Geological Survey</gco:CharacterString>

</gmd:organisationName>

<!-- cited responsible party contact information, either a phone number or e-mail address is required. This example has a voice telephone number. ISO19115 makes contact role mandatory as well. -->

<gmd:contactInfo>

<gmd:CI\_Contact>

<gmd:phone>

<gmd:CI\_Telephone>

<gmd:voice>

<gco:CharacterString>520-770-3500</gco:CharacterString>

</gmd:voice>

</gmd:CI\_Telephone>

</gmd:phone>

</gmd:CI\_Contact>

</gmd:contactInfo>

<!-- (M-M) ISO 19139 Mandatory: contact role -->

<gmd:role>

<!-- CI\_RoleCode names: {resourceProvider, custodian, owner, user, distributor, originator, pointOfContact, principalInvestigator, processor, publisher, author} -->

<gmd:CI\_RoleCode

codeList="http://www.isotc211.org/2005/resources/Codelist/gmxCodelists.xml#CI\_RoleCode"

codeListValue="pointOfContact">point of contact</gmd:CI\_RoleCode>

</gmd:role>

</gmd:CI\_ResponsibleParty>

</gmd:citedResponsibleParty>

</gmd:CI\_Citation>

</gmd:citation>

<!-- (M-M) Resource Abstract - A free text summary of the content, significance, purpose, scope, etc. of the resource. Exactly one value. -->

<gmd:abstract>

<gco:CharacterString>Example for the minimum required elements in a USGIN dataset metadata record. Note that this example includes conditional minimum elements that may or may not apply to a specific resource and its metadata. Although the resource is non-geographic, and extent element is included for example purposes.</gco:CharacterString>

</gmd:abstract>

<!-- (O-C) Resource point of contact (access contact) - CI\_ResponsibleParty element here would contain information for point of contact to access the resource. This information is mandatory for physical resources such as core, cuttings, samples, manuscripts. This example metadata record is not about a physical resource, so the element is empty (included here only to anchor this comment... -->

<gmd:pointOfContact/>

<!-- (O-C) Descriptive Keywords - Only required if the described resource is non-geographic, in

which case the single keyword 'non-geographic' is mandatory. This example instance is about itself, and example metadata record, and is thus non-geographic so the keyword is mandatory. Note that and example bounding box is included for information purposes as well. -->

<gmd:descriptiveKeywords>

<gmd:MD\_Keywords>

<gmd:keyword>

<gco:CharacterString>non-geographic</gco:CharacterString>

</gmd:keyword>

</gmd:MD\_Keywords>

<gmd:type>

<!-- Keyword Type - allowed values from MD\_KeywordTypeCode names: {discipline, place, stratum, temporal, theme} -->

<gmd:MD\_KeywordTypeCode codeList="http://www.isotc211.org/2005/resources/Codelist/gmxCodelists.xml#MD\_KeywordTypeCode" codeListValue="place">place</gmd:MD\_KeywordTypeCode>

</gmd:type>

</gmd:descriptiveKeywords>

<!-- (M-M) Resource language - Multiple instances of this element indicate that the linguistic content of the resource is available in multiple languages -->

<gmd:language>

<!-- ISO 639-2/T three-letter language code (http://www.loc.gov/standards/iso639-2/). -->

<gco:CharacterString>eng</gco:CharacterString>

</gmd:language>

<!-- (C-C) Topic category - A topicCategory code must be provided when hierarchyLevel is set to "dataset" (this example document) or "dataset series". Most USGIN resources will have MD\_TopicCategoryCode = "geoscientificInformation", which is the default value for this profile. More specific topic categorization should be done using keywords. -->

<gmd:topicCategory>

<!-- MD\_TopicCategoryCode names: {farming, biota, boundaries, climatologyMeterologyAtmosphere, economy, elevation, environment, geoscientificInformation, health, imageryBaseMapsEarthCover, intelligenceMilitary, inlandWater, location, oceans, planningCadastre, society, structure, transportation, utilitiesCommunication} -->

<gmd:MD\_TopicCategoryCode>geoscientificInformation</gmd:MD\_TopicCategoryCode>

</gmd:topicCategory>

<!-- (C-C) Resource content extent - Defines the spatial (horizontal and vertical) and temporal region to which the content of the resource applies. For USGIN, a geographicElement/­geographic­BoundingBox must be provided for any resource with content related to some geographic location. If the described resource is not related to a geographic area, the place keyword 'non-geographic' should be included in the descriptiveKeywords element. -->

<!-- note that although this example record is about a non-geographic resource, bounding boxes are anticipated for most resources so an example element is included, but it is not required. -->

<gmd:extent>

<gmd:EX\_Extent>

<!-- (O-C) Resource content extent bounding box -USGIN profile requires that if an EX\_Extent/geographicElement is supplied, it include a geographic bounding box with bounding latitude and longitude expressed using WGS 84 decimal degrees. The corner coordinates for the geographic bounding box must not coincide in one point, because this may result in fatal errors with some CSW implementations. Point locations must thus be represented as tiny rectangles. USGIN recommended practice is to place the actual point location in the lower left corner of the rectangle. -->

<gmd:geographicElement>

<gmd:EX\_GeographicBoundingBox>

<gmd:westBoundLongitude>

<gco:Decimal>-109.911001</gco:Decimal>

</gmd:westBoundLongitude>

<gmd:eastBoundLongitude>

<gco:Decimal>-109.910999</gco:Decimal>

</gmd:eastBoundLongitude>

<gmd:southBoundLatitude>

<gco:Decimal>34.772899</gco:Decimal>

</gmd:southBoundLatitude>

<gmd:northBoundLatitude>

<gco:Decimal>34.772901</gco:Decimal>

</gmd:northBoundLatitude>

</gmd:EX\_GeographicBoundingBox>

</gmd:geographicElement>

</gmd:EX\_Extent>

</gmd:extent>

</gmd:MD\_DataIdentification>

</gmd:identificationInfo>

<!-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* -->

<!-- Distribution (O-M) This element provides information to inform users how to obtain or access the described resource, which is considered part of the minimum useful content that should be provided by a metadata record. USGIN profile specifies that at least one MD\_Distribution/distributor and one MD\_Distribution/transferOptions element are required, and that the specified distributor provides the specified transfer options. -->

<gmd:distributionInfo>

<gmd:MD\_Distribution>

<gmd:distributor>

<gmd:MD\_Distributor>

<!-- (O-C) distributor point of contact - CI\_ResponsibleParty element here would contain information on who to contact if there is a problem with accessing the resource following the instructions in this distribution element. This information is mandatory, requiring at least a name (one of individual, organization, or position) and a voice telephone number or e-mail address. This example includes a position name and e-mail address. -->

<gmd:distributorContact>

<gmd:CI\_ResponsibleParty>

<gmd:positionName>

<gco:CharacterString>Web Master</gco:CharacterString>

</gmd:positionName>

<gmd:contactInfo>

<gmd:CI\_Contact>

<gmd:address>

<gmd:CI\_Address>

<gmd:electronicMailAddress>

<gco:CharacterString>webmaster@usgin.org</gco:CharacterString>

</gmd:electronicMailAddress>

</gmd:CI\_Address>

</gmd:address>

</gmd:CI\_Contact>

</gmd:contactInfo>

<gmd:role>

<!-- CI\_RoleCode names: pointOfContact is mandatory for at least one distributor responsible party -->

<gmd:CI\_RoleCode

codeList="http://www.isotc211.org/2005/resources/Codelist/gmxCodelists.xml#CI\_RoleCode" codeListValue="pointOfContact">point of contact</gmd:CI\_RoleCode>

</gmd:role>

</gmd:CI\_ResponsibleParty>

</gmd:distributorContact>

</gmd:MD\_Distributor>

</gmd:distributor>

<gmd:transferOptions>

<gmd:MD\_DigitalTransferOptions>

<gmd:onLine>

<gmd:CI\_OnlineResource>

<!-- The CI\_OnlineResource/linkage/URL element must contain complete URL to access the resource -->

<gmd:linkage>

<gmd:URL>http://repository.usgin.org/uri\_gin/usgin/dlio/337</gmd:URL>

</gmd:linkage>

</gmd:CI\_OnlineResource>

</gmd:onLine>

</gmd:MD\_DigitalTransferOptions>

</gmd:transferOptions>

</gmd:MD\_Distribution>

</gmd:distributionInfo>

</gmd:MD\_Metadata>