

Metadata Update Process and Procedures Q&A

General

Where can I get a copy of agency metadata records?

A copy of your metadata is forwarded to the WA Geospatial Clearinghouse. The University of Washington harvests the metadata XLM files daily. The metadata is harvested from UW for the federal repository; www.gisinventory.net. Instructions for submitting metadata can be found at geography.wa.gov under the Data & Maps.

Initial Setup

What is a Web Accessible Folder (WAF)?

It's simply a folder or directory that is set up on your network and is made accessible to others via the web. Typically it is isolated from the rest of an agency's network for security reasons.

There are a few options for setting up a WAF:

1. Check with your IT Department to see if a WAF already exists for your agency.
2. If a WAF does not exist, request that one be set up.
3. Use the WA Geospatial Portal WAF, contact the State GIS Coordinator to setup an account.

Once the WAF is setup, transfer your validated metadata records (as XML files) to your agency or WA Geospatial Portal WAF. Metadata files are harvested quarterly by the University of Washington for the WA Metadata Clearinghouse.

Does my agency need to set up a Web Accessible Folder (WAF)?

No, you don't, you can use the WA Geospatial Portal's WAF. It's being made available to agencies who don't want to deal with setting up their own WAF. Just contact the State GIS Coordinator to get an agency directory set up on the Portal.

Where can I find examples of how others publish metadata to the WA Clearinghouse using a WAF?

Additional documents are published on geography.wa.gov under the Data & Maps [Metadata](#) tab.

Create data and metadata

What Washington State GIS Metadata Standards need to be followed?

There are two metadata standards that the GIS community is required to follow:

- The documentation of *GIS Data* using the FGDC standard which can be found at: <https://ocio.wa.gov/policies/16000-spatial-data-management-policy-standards/16102-spatial-metadata-standard>
- The documentation of *GIS Applications and Data Services* which can be found at: <https://ocio.wa.gov/policies/16000-spatial-data-management-policy-standards/16105-application-data-services-metadata>

In both cases, the objective is to protect the State's investment in location-based data, databases, applications, and services through standardized documentation.

Where can I find a full list of Washington GIS Data Standards and Policies?

You can find a full list of all the GIS standards and Policies at either the www.geography.wa.gov site under [Governance & Standards](#) or the [Office of the CIO's](#) website.

In short, Washington State adopts all the Federal Geographic Data Committee (FGDC) data standards and guidelines as its spatial data standards for all applicable spatial data collection efforts. Adopting these data standards assures the greatest compatibility between data that are developed and maintained within and across government entities.

FGDC has developed over 45 data content standards for spatially referenced data. For a full list that apply under this standard can be found at: [FGDC standards](#)

Washington State agencies are expected to follow these recognized standards when creating and/or redeveloping existing location based data/databases, spatial datasets, geographic information systems and geospatial data exchanges starting in 2014.

FGDC data standards for Hydrography, Addressing, Trails, Geodetic Control and Cadastral have been formally adopted and currently in use in WA State government.

Who needs to follow Washington State GIS Standards and Policies?

These standards apply to all Washington executive branch agencies, agencies headed by separately elected officials, and institutions of higher education.

Washington State agencies are expected to follow these recognized standards when creating and/or redeveloping existing location-based data/databases, spatial datasets, geographic information systems, and geospatial data exchanges starting in 2014. A waiver process is available, but it must be submitted to the Office of the CIO's Geospatial Program Office.

What datasets need to be documented via metadata and published?

Location based data (geodatabase, shapefiles, Oracle spatial tables, tables that contain x,y data), spatial data applications and services need to be documented if they are published outside your work unit, across your agency or outside your agency.

As per the state metadata standard, ***geospatial datasets that meet one or more*** of the following criteria must have metadata created and published:

- Is mission critical or is required for regulatory purposes;
- Has estimated investment or expected life cycle costs that exceed \$500,000
- Is regularly distributed outside of the agency; and/or
- Has been designated significant by an agency CIO/Director or the Technology Services Board.

When do you need to create metadata?

Whenever you share any location based data or applications across your agency, or outside your agency.

Who needs to create metadata?

If you're in state government then it means pretty much everyone and it's mandatory. If you're from another governmental entity then it's highly advisable.

How do I create metadata?

There are a number of different tools out there to assist with metadata creation. Generally available tools in State Government are ArcGIS Desktop, ArcGIS Pro and ArcGIS Online. There is also a metadata editor from EPA - EPA Metadata Editor (EME) that can be [downloaded and installed](#) as a toolbox and used within ArcCatalog. Whatever tool you choose, be sure to export

the metadata into FGDC CSDGM-style XML format to validate using the USGS Validation Tool and to copy to the WAF.

Validate Metadata

How do I validate my metadata?

The USGS Validation Tool is the official tool to use to make sure your metadata is ready for the Clearinghouse. The Clearinghouse runs the XML files from the WAFs through a similar validator and will reject any that have errors in them. There are validation tools in ArcGIS Online (AGOL) as well as ArcCatalog. These validators are good, but not completely synchronized with the USGS tool. Even if your metadata passes these ESRI based validators, you may still have issues when you check metadata using the USGS tool.

We have listed some of the most common issues for validation that are not always found using the ESRI validation tools. ArcGIS Online has a simpler workflow for correcting errors, but either product will work – you just need to navigate to the field causing the error and fix it.

Tips & Tricks for Validation

- 1) If you have an optional metadata field that you add information to, then remember to fill out **ALL** related elements for that option. One example is Security Information. That is an optional element for FDGC CSDGM formatted metadata. However, some state agencies may require this element be completed. Here is an example from DSHS:
 - a. WA OCIO “141.10 – Securing Information Technology Assets Standards” requires in section “4.1 Data Classification” that “Agencies must classify data into categories based on the sensitivity of the data.”
 - i. <http://ocio.wa.gov/policy/securing-information-technology-assets-standards>
 - b. For my local example and responsibilities, WA DSHS Information Security Standards Manual section “3.1 Classify Data According to Level of Protection Needed (3.2.1)” incorporates the WA OCIO 141.10 section 4.1 requirements.
 - c. FGDC CSDGM Specification notes that 1.12 Security Information is an optional element from the standard’s perspective. So, if an author of FGDC CSDGM metadata is required to categorize data for security purposes, then FGDC CSDGM standard provides 1.12 Security Information as an opportunity to record the fact that the requirement has been met.
 - i. <https://www.fgdc.gov/csdgmgraphical/ideninfo.htm>
 - ii. <https://www.fgdc.gov/csdgmgraphical/ideninfo/secrty.htm>
 - d. Again just remember to complete all related elements for optional fields.

2) There are known issues with the validators (as of April 2017) regarding multiple enumerated domains for one or more fields. If you have this error:

- a. Sort your enumerated domains values in ascending order before submitting to the validator, [or...](#)
- b. Use the following workaround:
 - i. Submit to USGS validation tool without clicking the “Upgrade” box
 - ii. Download the output XML file (this step assures they are in ascending order)
 - iii. Submit the output XML file back into the validator and click the “Upgrade” box
 - iv. Confirm no other errors
 - v. Download the upgraded XML file
 - vi. Add XML file to the WAF location

Double-click on this video with the steps to help you. The XML file ready for the WAF is named “ProperMetadata_upgraded.xml”



MetadataEnumerated
DomainOrderWorkar

What metadata elements help others find the datasets using the Clearinghouse?

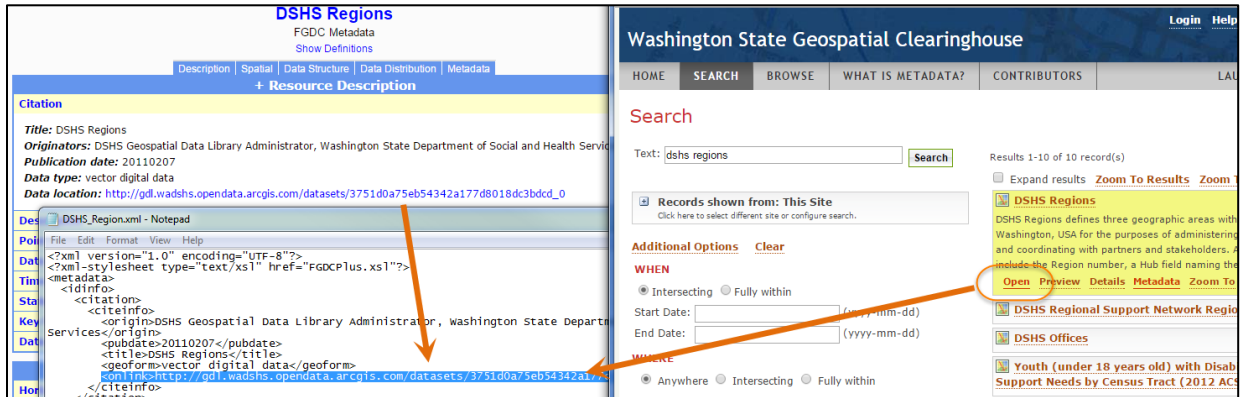
There are a few elements that you should give special attention to because they assist with the searching capabilities in the metadata Clearinghouse:

1. **Title** – A descriptive, representative title of what the data is “all about” is critical since that is the element that searches will be performed on. For example, many of our data sets are listed as “PLS-PT” which may mean something to us but very little to a typical user in Washington or Vermont. A title like “Public Land Survey Points of Washington” is a better option.
2. **ISO Category** – This element is used to categorize your data into logical groupings. Sometimes it’s unclear to users as to what a “303D Listing” is, but they might have a better idea if the data set is available under the “Environment” ISO Category.

You can find a list of categories at:

http://geography.wa.gov/sites/default/files/iso_19115_metadata_topic_categories.pdf

- Citation** - This element gets the reader and consumer of your metadata from “I want that data” to “I got it!”



- Location** – This is an alternate element that can help users find your data for viewing or downloading. Providing a URL as a resource tag is another way of connecting metadata to the Data Catalog available at <http://www.geography.wa.gov/node/111>

Verify and Update

Where does the oversight fall in making sure metadata is created and published?

The responsibility falls in the Office of the Chief Information Officer, the Geographic Information Technology Committee and ultimately the Geospatial Program Office.

What happens if I don't comply?

Your work product does not comply with WA policies and standards, you may have to spend more staff time answering questions about the data you manage than you would otherwise, your data is less valuable and usable for WA state government purposes, and you're not returning good value for the money paid to you by the people of the State of Washington. The agency CIOs are required to sign some sort of OCIO compliance document each year and need you to do your part to comply.