MD iMAP Data Submission Policy

Version 2.0
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This document provides information on data preparation related to services published on Public MD iMAP. Topics covered include projection, attributes, tags, symbology, scale dependencies, metadata and details of the submission process. This policy has been thoroughly developed to assure the quality, accuracy and reliability of MD iMAP services and the overall MD iMAP system.

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Data Submission Policy

It is important that the datasets on MD iMAP be thoroughly documented to ensure the integrity of the information being presented via MD iMAP.

Organizations can submit datasets for inclusion into public MD iMAP using the guidelines provided below. The datasets will be evaluated according to the policy set forth below. Datasets that do not meet the standards or conform to the requirements below will not be available through MD iMAP.

This policy is written primarily for contributors using Esri ArcMap and ArcCatalog products. For those without access to these specific resources, please submit documentation with written responses for as much of the guidelines as possible.

Step 1: Prepare Data for Submission

Data should be prepared for submission according to the following "best practices" for creating map services. When preparing data for inclusion on MD iMAP, it is important to treat the data as an informational product that will be meaningful to others outside your agency. The Department of Information Technology Geographic Information Office (DoIT GIO) recommends the following to produce an intelligent map service:

Projection

- Project data to WGS 1984 Web Mercator (auxiliary sphere)
  - ArcGIS users would choose, Projected Coordinate System → World → WGS 1984 Web Mercator (auxiliary sphere)
  - **IMPORTANT**: When reprojecting from State Plane NAD 1983 to Web Mercator use the transformation NAD_1983_to_WGS_1984_1

Attributes

- Delete any extraneous field from the attribute tables
- Assign Esri operational field name aliases as listed below:
  - OBJECTID > GIS Object ID
  - Shape > GIS Shape
  - Shape_Length > GIS Shape Length (m)
  - Shape_Area > GIS Shape Area (m)
  - Delete duplicate ObjectID, Shape_Length, and Shape_Area fields
- Rename field name aliases to something meaningful to others outside your agency

Note: Field aliases cannot start with a number because this will cause errors when enabling WFS

Symbology

A dataset must be accompanied by information on how the organization prefers the data to be symbolized. Complex symbols can take longer to draw than simple symbols and ArcGIS Server cannot handle some custom symbology.

Use simple labeling techniques. Consider using an annotation layer versus dynamic labeling. Use simple line and fill symbols where possible. Avoid symbology that contains multiple layers, complicated dash patterns, hash lines or outlines.

Note: If a more detailed symbol is provided, some output formats, such as KML and WFS will randomly assign a simple symbol replacement.

Scale Dependencies

Set the appropriate scale dependencies for labels and geometry. Check to determine if the right amount of information is displayed at various scales. If applicable, set scale dependency so that symbols are not drawn until zoomed in to a certain scale.

MXD Preparation

- Under Map Document Properties, enter the following:
    - o **Title**: Same as feature dataset/service level title from metadata
    - o **Summary**: Same as feature dataset/service level summary from metadata
    - o **Description**: Same as feature dataset/service level description from metadata
    - o **Credits**: Same as feature dataset/service level credits from metadata
    - o **Tags**: Same as feature dataset/service level tags from metadata
    - o **Pathnames**: Check Store relative pathnames to data sources

- Under Layer Properties, complete the following:
    - o Under General tab:
        - ▪ **Layer Name**: Same as feature class/layer level title from metadata
        - ▪ **Description**: Same as feature class/layer level description from metadata
        - ▪ **Credits**: Same as feature class/layer level credits from metadata
        - ▪ **Scale Range**: Include scale range specifications, if applicable

    - o Under Display tab
        - ▪ **Field**: Select an appropriate field for initial display

Metadata

All datasets submitted to MD iMAP must conform to Esri's "Item Description" metadata style. This simple style provides important basic elements about each dataset. It leverages Esri's metadata format, which contains elements that can store all content in all metadata standards supported by ArcGIS for Desktop.

All datasets submitted to MD iMAP must contain the following mandatory metadata elements. We welcome the inclusion of any additional metadata elements.

Feature Dataset/Service Level Metadata, enter the following:
- **Title**: The title should follow the format "Maryland <Service Name>"
  Example: "Maryland Incentive Zones"

- **Tags**: These words or short phrases describe your item. Separate tags with commas. Reference Table 2-1 for mandatory metadata tags.

Table 2-1 Mandatory Metadata Tags

Tag	Description
"MD iMAP"	All submitted datasets should include this tag.
Location	The location of the dataset. Be as specific as possible. Include both abbreviations and full names. *Example: "Maryland", "MD"*
MD iMAP Category	The category of the dataset. Include both Category Acronym and Category Name. See http://imap.maryland.gov/Pages/mdimap-2.0-data-categories.aspx for complete list of categories, with descriptions and examples for each category. *Example: "BNDY", "Boundaries"*
Agency	The name of the agency or organization that created the dataset. Include both Agency Acronym and Agency Name. *Example: "MDP", "Maryland Department of Planning"*
GIS File Format	"Raster" or "Vector" – Choose one
Map Display	"Dynamic" or "Cached" – Choose one
Title Components	The keywords of the dataset. Include keywords from the title of the dataset submission as tags. Example: "Census", "Blocks", "Census Blocks", "2009"
Layer Components	The descriptive keywords from the dataset and/or layer descriptions that may be helpful in a known item search or a speculative search for the end user. *Example: "Land Use", "Land Cover", "County Boundary", "Land Use Land Cover"*
"WMS", "WFS", "KML"	All submitted datasets should include these tags.

- **Summary**: A single sentence that briefly describes the dataset, based off of the dataset name and/or description and layer names.
  Example: "Map service of fire stations and associated facilities for State, County and Municipal Government"

- **Description**: A narrative summary of the dataset's contents, such as what layers are included, how the data was created, detailed attribute descriptions, etc.
   a. **Date Last Updated**: At the end of the description, include information indicating the date that the dataset was last updated. Use format: "Last Updated: MM/DD/YYYY"

- **Credits**: The abbreviations of the agencies and/or organizations that contributed to the dataset and all layers included in the dataset. Separate credits with commas.
   Example: "MD iMAP", "DNR"
   Note*: "MD iMAP" should be included under credits for all submissions.*

- **Use Limitation**: MD iMAP Access and Use Constraints statement will be entered into this category
   Note*: If your entity has a separate access and use constraint, please include this as part of the description*

Feature Class/Layer Level metadata, enter the following:
- **Title**: The title should clearly state the name of the data in the feature class/layer
   Example: "Alternative Fuel Sites"

- **Tags**: These words or short phrases describe your item. Separate tags with commas. Reference Table 2-1 for mandatory metadata tags.

- **Summary**: A single sentence that briefly describes the layer, based off of the layer name.
   Example: "Career and volunteer fire stations at the county level in Maryland"

- **Description**: A narrative summary of the layer's contents, such as what features are included, how the data was created, detailed attribute descriptions, etc.
   a. **Date Last Updated**: At the end of the description, include information indicating the date that the layer was last updated. Use format: "Last Updated: MM/DD/YYYY"

- **Credits**: The abbreviations of the agencies and/or organizations that contributed to the layer. Separate credits with commas. Include Provider Name and Provider Email, if available.
   Example: "MD iMAP", "DBED", "Emiko Kawagoshi", emiko.kawagoshi@maryland.gov
   Note*: "MD iMAP" should be included under credits for all submissions.*

- **Use Limitation**: MD iMAP Access and Use Constraints statement will be entered into this category
   Note*: If your entity has a separate access and use constraint, please include this as part of the description*

Note*: At this time, we are not accepting services organized with group layers. If you have any questions or concerns. Please contact your agency representative for more information or this or any other issues you might encounter. List of GIO Office staff with agency assignments: http://imap.maryland.gov/Pages/gio-organizational-chart.aspx.*

Step 2: Notify the DoIT GIO Office

Data should be submitted to the DoIT GIO Office for inclusion on MD iMAP. Send an initial email request to your DoIT GIO staff person liaison (see MD iMAP Portal GIO Office tab for list of GIO staff http://imap.maryland.gov/Pages/gio-organizational-chart.aspx).

The following information should be included in the email:
- Data Layer(s) Name
- Desired Service Name
- Request the Map Service to be Cached? Yes or No
- Frequency of Data Update
- Last Updated
- Map Service Description (225 characters max)
- WFS enable? Yes or No, if No please provide an explanation (Ex. – Secure Data, Licensed Data) WFS will be enabled by default.
- Has Data Been Submitted to the Maryland Open Data Portal (http://data.maryland.gov)? Yes or No

Step 3: Receive Approval to proceed via email from DoIT GIO

DoIT GIO will review the submission request and provide email confirmation upon approval. Data delivery method will be provided in the notification email.

Step 4: Submit Data

Once the approval notification email is received, submit to DoIT GIO:

- ☐ MXD with Symbology and Scale Dependencies
- ☐ File Geodatabase with Feature Classes
- ☐ Any Additional Supporting Documentation

Step 5: Map Service Deployment and Verification

Once the data, MXD and metadata have been received and verified by the DoIT GIO staff, the data will be loaded into the geodatabase and map service(s) created in the staging environment. The following verification steps will occur:

- Requesting party will verify the map service in the staging environment upon receiving an email from DoIT GIO. Staging allows for review via the internet, specifically by the requesting party to provide confirmation for deployment into production. Should any changes/updates be necessary prior to production deployment, staging allows those changes/updates to be completed and reviewed.

- When confirmation is received to deploy to the production environment, it will be the responsibility of the requesting party to verify production and provide confirmation.

Data Caching
MD iMAP would like to make datasets available as dynamic services as much as possible. This will allow end users to resymbolize the service and help reduce redundant and application specific services. However, MD iMAP may cache datasets to optimize performance. An organization can request that the submitted data be included in an existing data cache or that a new cache be established. The DoIT GIO will make the final decision whether or not to cache the data.