

GEMS SUBMITTAL CHECKLIST

Dec 8, 2020

ELEMENT

PATH/NAME (relative to .zip file)

Contents of submittal package

REQUIRED	
<input type="checkbox"/> Transmittal letter	
<input type="checkbox"/> Validation.html from Validate Database tool	
<input type="checkbox"/> ValidationErrors.html from Validate Database tool	
<input type="checkbox"/> Report from Geologic Names Check tool	
<input type="checkbox"/> Map publication folder (described below)	

Contents of map publication folder

REQUIRED	
<input type="checkbox"/> High resolution graphic	
<input type="checkbox"/> Browse graphic	
<input type="checkbox"/> FGDC-compliant metadata in valid XML	
<input type="checkbox"/> Map database folder (described below)	
<input type="checkbox"/> Shapefile version folder of database archive (described below)	
AS NEEDED	
<input type="checkbox"/> Map pamphlet	

Contents of map database folder

REQUIRED	
<input type="checkbox"/> .gdb folder	
<input type="checkbox"/> .mxd map document or .aprx project file	
<input type="checkbox"/> FGDC-compliant metadata in valid XML (copy of above)	
<input type="checkbox"/> Resources folder (described below)	
AS NEEDED	
<input type="checkbox"/> Map pamphlet	
<input type="checkbox"/> Base data folder (required if not published elsewhere)	
OPTIONAL	
<input type="checkbox"/> ArcReader document, KML files, QGIS project, i.e., files for viewing data with free software	

Contents of Resources folder

REQUIRED	
<input type="checkbox"/> Symbology as style, stylex, carto rep, lyr, etc.	
<input type="checkbox"/> Non-standard fonts ¹	
AS NEEDED	

<input type="checkbox"/> CMU graphic (include only if not present in any other element)	
<input type="checkbox"/> Figures (numbered as in report)	
<input type="checkbox"/> Tables (numbered as in report)	
OPTIONAL	
<input type="checkbox"/> Formatted DMU or LMU document	

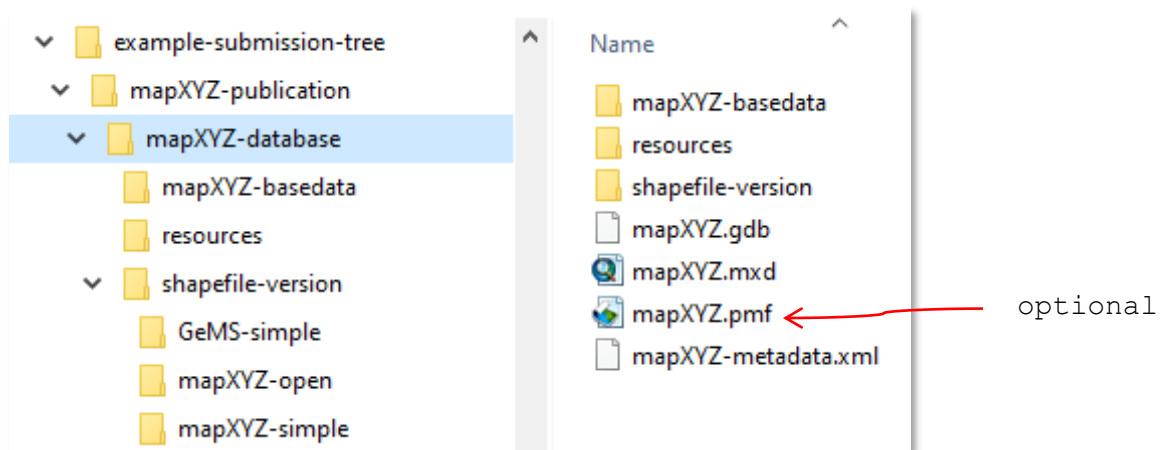
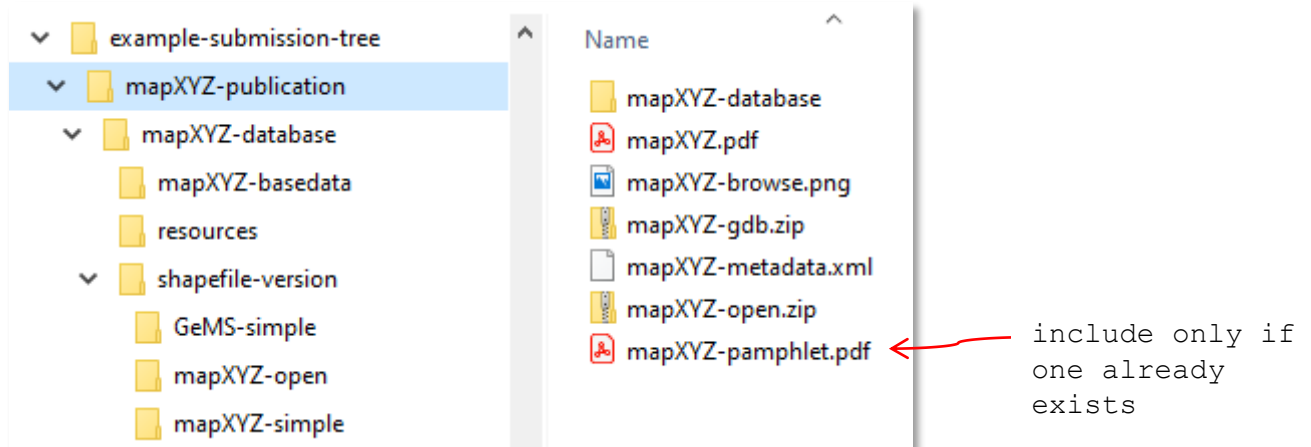
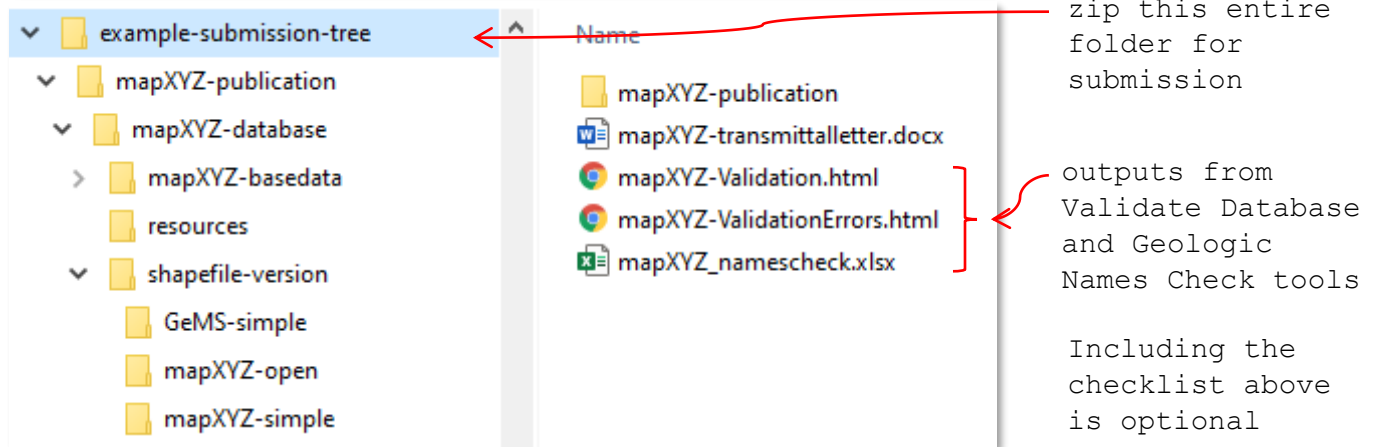
Contents of shapefile version folder

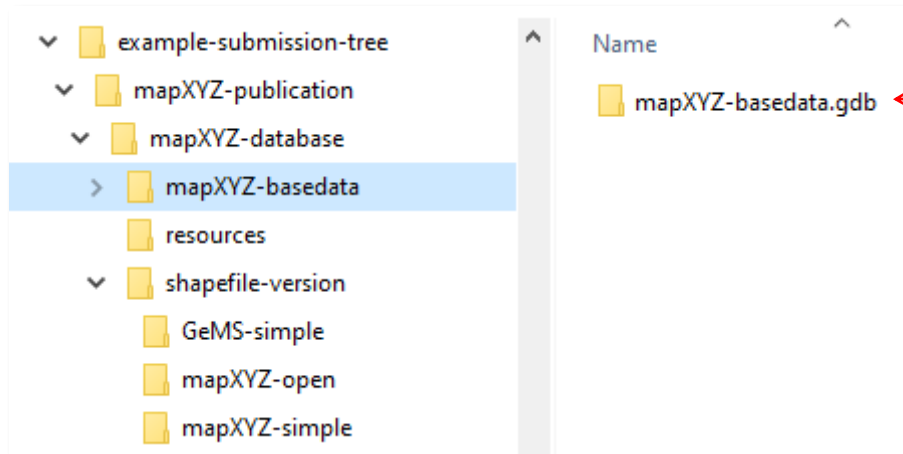
(best generated by using Translate to Shapefiles tool)

REQUIRED	
<input type="checkbox"/> Shapefile for each feature class	
<input type="checkbox"/> .dbf file for each nonspatial table	
<input type="checkbox"/> text file for each table with field contents over 255 characters in length	
<input type="checkbox"/> README-like text file describing file and field names	
AS NEEDED	
<input type="checkbox"/> Other open-source format, e.g., GeoPackage, PostGIS, Geo/TopoJSON, CSV with geometries in WKT, etc.	

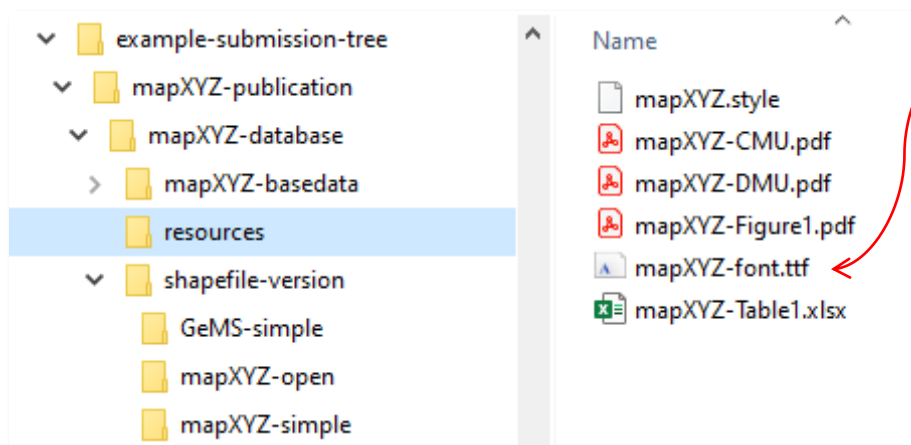
¹Standard fonts are those installed with ArcMap or ArcGIS Pro, any of the FGDCGeo special symbol fonts. Check the distributor's licensing for any restrictions on use or sharing of other fonts.

Screenshots from an example submission package directory tree



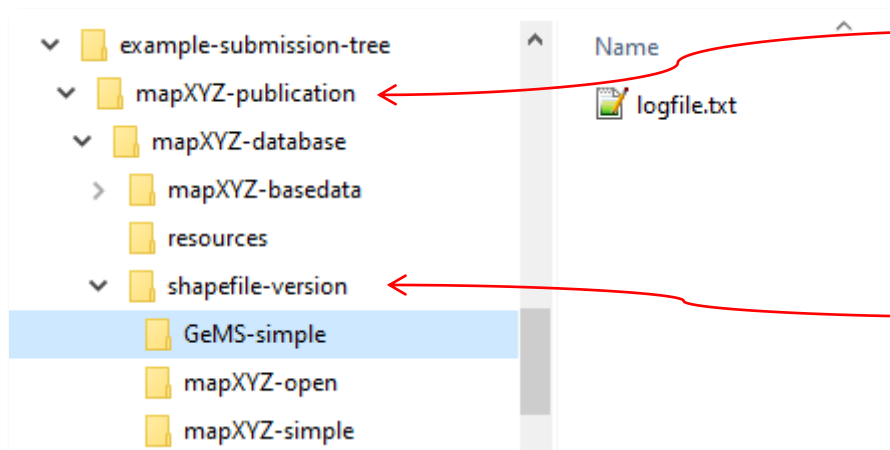


Include if not published elsewhere. Also acceptable as feature dataset within mapXYZ.gdb. If data sources helped interpret geology, list as Sources in metadata



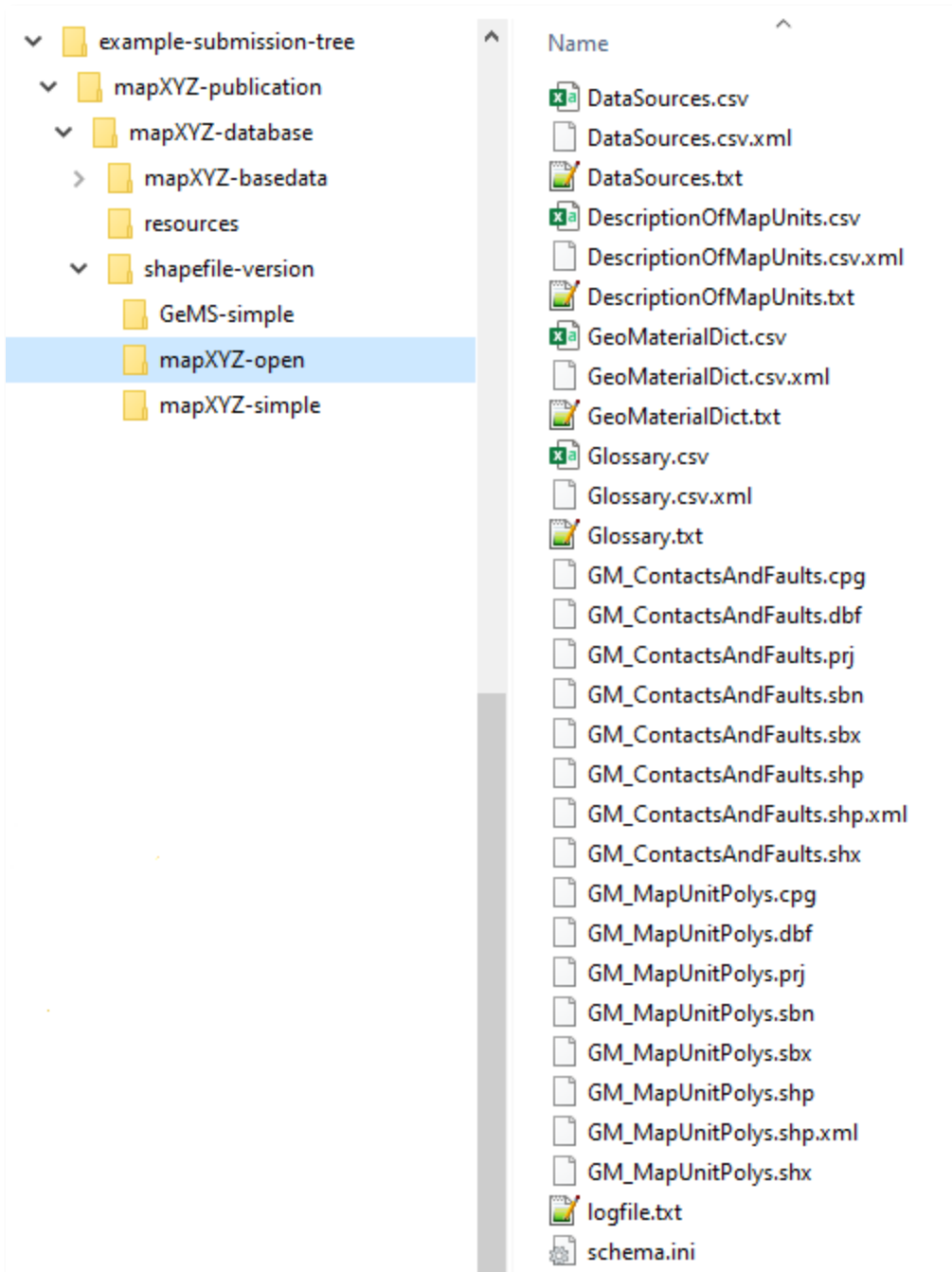
see footnote about fonts

figures and tables must be machine parseable - not rasters - if not already formatted as such in mapXYZ-pamphlet.pdf

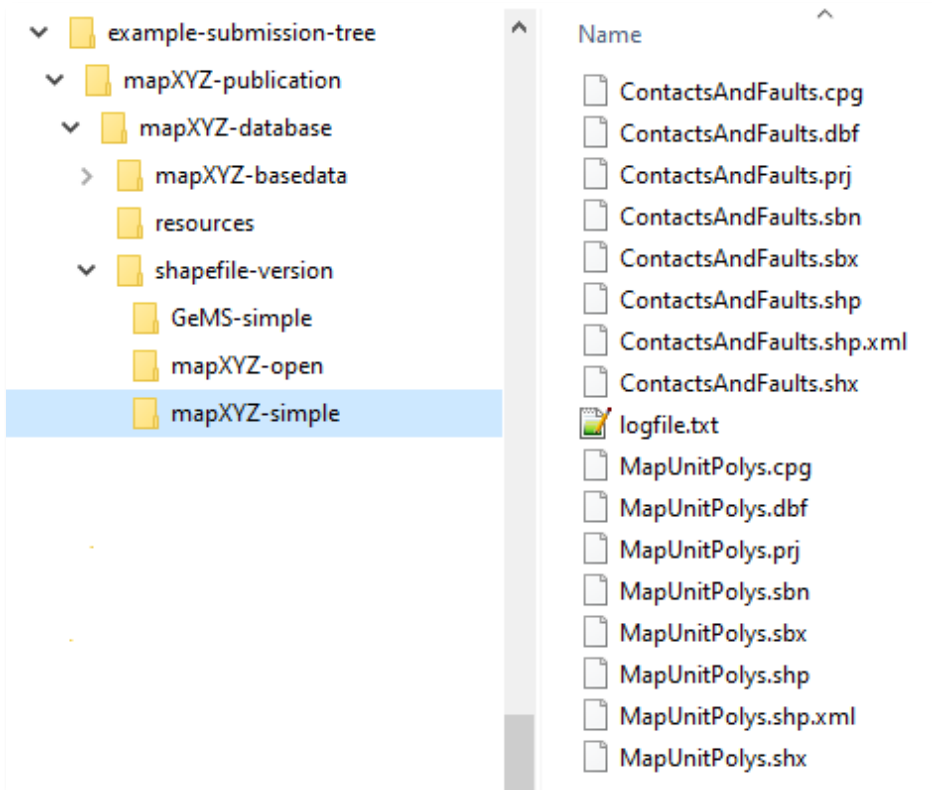


If also submitting another open-source version of the database, include it as a folder within mapXYZ-database

all content generated automatically by Translate to Shapefiles tool



Check for and delete xxMapXYZ.gdb in this folder. The Validate Database tool attempts to delete it automatically but usually fails



Further guidance from *U.S. Geological Survey National Cooperative Geologic Mapping Program, 2020, GeMS (Geologic Map Schema)—A standard format for the digital publication of geologic maps: U.S. Geological Survey Techniques and Methods, book 11, chap. B10, 74 p., <https://doi.org/10.3133/tm11B10>*.

Elements of map publication, database archive, and Resources folder

Table 3. Elements of a digital geologic map publication named "mapXYZ".

[Abbreviation: FGDC, Federal Geographic Data Committee]

Filename	Comments
Required elements	
mapXYZ.pdf	Map graphic (high resolution; publication quality)
mapXYZ-browse.png (or .jpg, .tif)	Browse graphic or thumbnail of map (should be a small file)
mapXYZ-metadata.xml	FGDC-compliant metadata for the overall map publication; additional inclusion of metadata in a more readable form (for example, .txt, .html) as a supplementary file is recommended
mapXYZ-gdb.zip	Zip archive containing the map database and other elements of the digital data package (see table 4 below for contents)
mapXYZ-open.zip	Open shapefile version of database (see "Shapefile Version of the Database" section below for contents)
As-needed elements	
mapXYZ-pamphlet.pdf	Map pamphlet (fully formatted; publication quality)

Table 4. Required, as-needed, and optional contents of the zip archive (that is, the "mapXYZ-gdb.zip" file) that contains the database and other elements of the digital data package for a geologic map publication named "mapXYZ".

[Abbreviation: FGDC, Federal Geographic Data Committee]

Filename	Comments
Required contents	
mapXYZ.gdb (folder)	Folder that constitutes the map database
mapXYZ.mxd	ArcMap document stored using relative pathnames and including relevant macros
mapXYZ-metadata.xml	FGDC-compliant metadata for the overall map publication (copy of file referenced in table 3 above)
resources (folder)	Folder of digital resources that accompanies map database in a digital geologic map publication (see table 5 below for contents)
As-needed contents	
mapXYZ-pamphlet.pdf	Map pamphlet (copy of file referenced in table 3 above)
mapXYZ-base.gdb (folder)	Folder with base-map data (required if not published elsewhere)
Optional contents	
mapXYZ.pmf	ArcReader document

Table 5. Required, as-needed, and optional contents of the resources folder that accompanies the database in a digital geologic map publication named "mapXYZ".

[Abbreviation: FGDC, Federal Geographic Data Committee]

Filename	Comments
Required contents	
mapXYZ.style	ArcGIS .style file that contains the area, line, and point symbols used to symbolize the map. Must include all symbols specified in database. It is recommended that the .style contain a subset of the symbols in the FGDC cartographic standard; please see Resources on the GeMS website (https://ngmdb.usgs.gov/Info/standards/GeMS/) for a suggested master .style file. Note that a .style file is not necessary if Esri cartographic representations are encoded in the database itself
fonts (.ttf or .otf files)	All nonstandard font files that are used for special characters or are referenced by the line or point symbols in the .style file
As-needed contents	
CMU (as .pdf or .png file)	Graphic representation of the Correlation of Map Units (CMU) diagram. Needed only if (1) CMU is present in report and (2) CMU is not encoded within the map database
figures (.png, .pdf, .jpeg, .gif, or .tif files)	Must be numbered as in report; may be included as individual files or gathered into a folder
tables (.dbf, .ods, .xls, or other file formats)	Must be numbered as in report; may be included as individual tables or gathered into a folder
Optional contents	
DMU (as .pdf or .docx file)	Additional document for Description of Map Units (DMU) (fully formatted, including headings)

Shapefile Version of the Database

To make database content available without the requirement of having an ArcGIS license, now or in the future, an open shapefile version of the database is required. This version uses the well-documented shapefile and .dbf formats, which have length limitations of fields (must have ≤ 255 characters) and field names (must be ≤ 10 characters).

The open shapefile version should include the following elements:

- A shapefile for each feature class.
- A .dbf file for each nonspatial table.
- For each feature class or nonspatial table that originally contained long (>255 characters) fields, a text file that documents the original contents of the long (now shortened) fields.
- A text file that documents (1) the arrangement of feature classes into feature datasets, (2) the translation of feature class names to shapefile names, (3) the translation of nonspatial table names to .dbf file names, and (4) the translation of long field names to shortened field names.

The script *GeMS_TranslateToShape_Arc10.py* or its replacement (available at https://github.com/usgs/GeMS_Tools) automates the creation of this open shapefile version. The script also creates a simple shapefile version of the database that has truncated content and no related tables (that is, no Glossary, DescriptionOfMapUnits, DataSources, or GeoMaterialDict tables).