

Intelligent Maps Checklist: Thematic Image Services

Raster Phase (ArcCatalog):

- Are all rasters TIFFs with LZW compression? Are the file names of your rasters consistent?
- If someone saw the file names of your rasters in an identify window would they know they belong to the service you're producing?
- For each raster, check the following in the Raster Dataset Properties dialogue:
 - Do all rasters have the same number of bands (usually 1)? Verify the raster has this number of bands.
 - Verify the source type is set to thematic.
 - What is the pixel depth of the rasters? _____ Verify the pixel depth is this value.
 - What is the pixel type of the rasters, signed or unsigned? _____ Verify the pixel type is this value.
 - What is the NoData value of your rasters? _____ Verify that each raster has this NoData value.
 - Are pyramids built for the raster? Build Pyramids on the raster (nearest neighbor) if necessary.
 - Are statistics calculated for the raster? Calculate Statistics on the raster if necessary.
 - What's the expected data range of your rasters? Lowest value: _____. Highest Value: _____.
 - Check raster statistics, verify that the raster dataset has values in the range you were expecting.

Attribute Table Phase:

- Create an attribute table as a file geodatabase table. Tip: The easiest way is to export a table from a raster TIFF attribute table that already matches all the pixel values in ALL the rasters.
- Does the attribute table have in its value field every value from all the rasters going into your mosaic? If not, add the missing values.
- Does the attribute table have under 2,000 records? If not, you can use a remap function first to serve a legend.
- If you create a remap function, make sure the attribute table matches the remapped values, not the pixel value.
- Does the attribute table have a value field and a count field?
- Does the attribute table have text field called ClassName?
- Is the ClassName field populated with the text exactly how you would like to see it in the legend?
- Does the attribute table have short integer fields called Red, Green, and Blue?
- Are the red, green, and blue fields populated with the colors you'd like to see on the map and in the legend?
- Does the table have all the other fields you would like to add that will be available to customers in the pop-up?
- Do these other fields have aliases with customer-friendly names?

Mosaic Phase:

- If someone saw the name of the mosaic, would they know it belonged to the layer you're producing?

Mosaic Dataset Properties – General Tab:

- Verify the mosaic coordinate system. Is this an equal-area projection, if the service is to be used in analysis?
- Verify the mosaic source type. It should be set to thematic.
- Verify the pixel type and pixel depth of the mosaic are the same as all the rasters that are going into the mosaic.
- Verify the mosaic's NoData value matches that of all your rasters.

Mosaic Dataset Properties – Defaults Tab:

- Set maximum size of requests, in rows and columns. (Suggested value: 30,000 rows and 30,000 columns)
- Verify compression methods are LZ77, and None. Verify default is LZ77.
- Verify default resample method is Nearest Neighbor.
- Set "maximum number of items downloadable per request" to 0 unless you're ok with people downloading your rasters directly from the service.
- Right click mosaic and choose Add rasters... then add the rasters to your mosaic.

- ❑ Right click mosaic and choose Modify -> Build item pyramids and statistics. This assures all pyramids and statistics are now built in the mosaic.

Overviews:

- ❑ Add mosaic dataset to ArcMap. Right click the mosaic in ArcMap's table of contents and choose Open -> Attribute table. You will see the footprint table of the mosaic.
- ❑ What is the highest MaxPS value in the footprint table? _____. What is the highest HighPS value? _____.
- ❑ Calculate the MaxPS and HighPS values of all the rows to these highest MaxPS and HighPS values. Close ArcMap.
- ❑ In ArcCatalog, right click the mosaic dataset and choose Optimize -> Define overviews.
- ❑ Under overview tile parameters, enter the highest MaxPS value into the field that says "Pixel size (optional)".
- ❑ Enter the number of overview levels desired in the field that says "Number of Levels (optional)". Click OK.
- ❑ Right click mosaic and choose Optimize -> Build overviews.
- ❑ Right click mosaic and choose Optimize -> Analyze Items. View the results and correct any issues the Analyze tool identified before proceeding to the next phase.

Raster Functions on the Mosaic:

- ❑ Create an attribute table function to associate your attribute table to the mosaic. Read more about [how to set up an attribute table function](#).
- ❑ Add the mosaic to ArcMap. This is one last check to make sure symbology is correct before publishing a service.
- ❑ If you plan to deliver a processing template with the service rather than serving the mosaic with the attribute function applied, save the function chain as a raster function template, and delete the function chain from the mosaic. Read more about [saving a raster function template](#).

Image Service Phase:

- ❑ If someone saw the name of the image service, could they guess what the service is about from the name alone?
- ❑ What's the description of this service? _____ Write this in plain text in a text editor and keep it handy.
- ❑ What's the brief summary of this service? _____ Write this in your text editor.
- ❑ What tags will you use to help your customers find this resource? Write these in a text editor between commas.
- ❑ Give credit where it is due. Write a statement for the Credits field and keep this handy in your text editor.
- ❑ Now it's time to publish the service! Right click the mosaic in ArcCatalog and choose "share as image service". Copy the text from your text editor into the fields under the "Item Description" tab.
- ❑ If publishing processing templates with the service, add your processing templates now by clicking on the Function tab, then click the Manage button. From there, choose the templates you would like to publish with your service, and specify a default template.

Checking Your Service:

- ❑ Add your service to ArcMap, zoom in to a small area, and save a raster from the service to your hard drive. Check this raster in ArcMap to verify all attributes are present.
- ❑ Add your service to a map in ArcGIS Online. Sign in, then enable and configure a pop-up to verify all aliases are correct and all attributes are present.
- ❑ In ArcCatalog, click on the service in the catalog tree. In the pane on the right, click the Description tab. Click Edit to set a scale range and extent.
- ❑ If you are using any hyperlinks in the Description field for your service, close ArcCatalog and open ArcMap. Open the catalog window in ArcMap. Right click the service and choose Service Properties. Choose Item Description. Paste your plain-text description, marked up with HTML tags, into the Description field. Click OK.

<http://esriurl.com/ThematicImageServicesChecklist>

