# Adding layers to the Map Algebra Tool

## Update service

1. On the dsidb server, choose an existing subfolder under C:\Raster\Data or create a new one. Download the raster files to this location. Generally, only the .tif and .tfw files are needed.
2. Open C:\Raster\MXD\Rasters.mxd in ArcMap. Add the new raster to the MXD. If it prompts to build pyramids, select Yes.
3. ArcMap will display a warning that the layer has an unknown spatial reference. Select OK and check that the layer draws on the map.
4. In ArcToolbox, navigate to Data Management Tools > Projections and Transformations > Define Projection.
   1. For the Input Dataset, select the new raster.
   2. If you know the projection of the raster, choose this as the Coordinate System, otherwise navigate to Layers > GCS\_WGS\_1984. Click OK.
5. Symbolize the layer if necessary, then save the MXD. Publish the updated MXD by overwriting the Rasters map service in the Raster folder.

## Update application

1. Create a new javascript object for the new layer. The format should be as follows:

"Population\\popd\_00.tif": {

"index": "81",

"category": "Population",

"source": "This is a long description of the layer.",

"title": "2000 Gridded Population of the World - Population Density"

}

label = [subfolder name][\\[raster].tif](file:///\\[raster].tif)

category = folder name within the application (usually should be similar to subfolder name)

index = layer id from service endpoint (<http://dsidb.cse.msu.edu:6080/arcgis/rest/services/Raster/Rasters/MapServer>)

source = metadata to display in the application

title = layer title to display in the application

Add this object to the rasterSources list in the config/defaults.js file.

1. Update the citations object in config/defaults.js file if a new data source was added. Add a new formatted string to the end of the list.

"citations":['United Nations Environment Programme, Environment for Development, 2014. Environmental Data Explorer. Available online at: <a href="http://geodata.grid.unep.ch/">http://geodata.grid.unep.ch/</a>',

'My second citation here. Available online at: <a href="http://link.com">http://link.com</a>'],

1. Update the application in the deployment directory and the new layer should display in the Layer Picker dropdown, Choose Rasters popup, and the Expression Builder dialogs.