

Create An FS Topo Vector Tile Package (TPK) For Use In ArcGIS Collector

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Manage Tile Cache

Cache Location
C:\tmp

Cache Name (optional)
FsTopoCache

Manage Mode
RECREATE_ALL_TILES

Input Data Source (optional)
C:\tmp\FsTopoTiles.mxd

Input Tiling Scheme (optional)
ARCGISONLINE_SCHEME

Import Tiling Scheme (optional)

Minimum Cached Scale (optional)
1155581.108577

Maximum Cached Scale (optional)
4513.988705

Scales [Pixel Size] (Estimated Disk Space) (optional)

Scale	Pixel Size	Estimated Disk Space
☒	288895.277144	[76.437028285] (2.00 MB)
☒	144447.638572	[38.218514143] (8.00 MB)
☒	72223.819286	[19.109257071] (31.00 MB)
☒	36111.909643	[9.554628536] (122.00 MB)
☒	18055.954822	[4.777314268] (487.00 MB)
☒	9027.977411	[2.388657134] (1.90 GB)
☒	4513.988705	[1.194328567] (7.59 GB)
☐	2256.994353	[0.597164284] (30.34 GB)
☐	1128.497176	[0.298582142] (121.30 GB)

Select All Unselect All Add Value

Area of Interest (optional)
Coconino admin bdy
area_of_interest

Maximum Source Cell Size (optional)

OK Cancel Environments... Show Help >>

Background – Basemaps in ArcGIS Collector help users put mapped features into context. Basemaps typically include topography, surfaces, or imagery.

Although it is possible to download basemaps from ArcGIS OnLine over a wireless connection, that process can be slow and unreliable when wireless bandwidth is limited and the basemap's file size is large. An alternative is to create tile packages (TPK files) locally, and "side-load" them to mobile devices as a substitute for wireless retrieval.

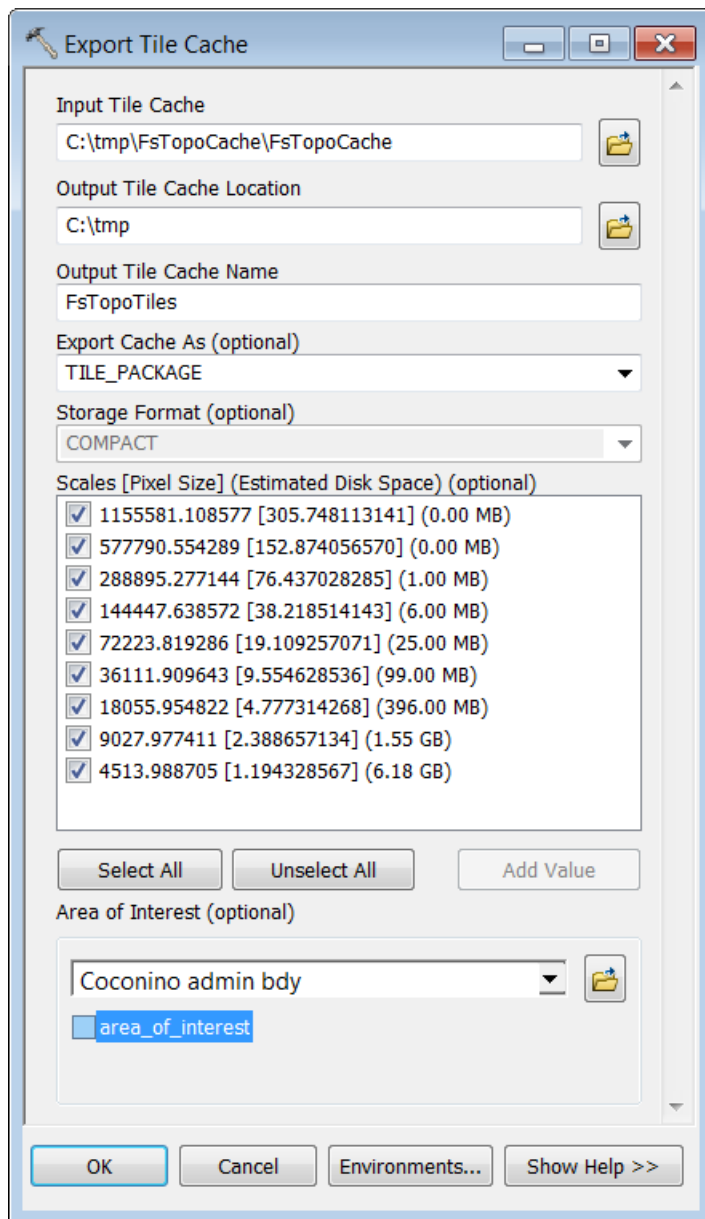
This guidance outlines a three-step approach to creating a tile package from the FS Topo vector dataset.

Step 1 - Compose and save an MXD that includes any FS Topo vector elements of interest, and set their scale dependency as desired. In this example, all FS Topo vector elements were set to a scale dependency of 1:100,000, except that **PBS Text**, **PBS Road Shield**, and **PBS Contour Text** were set to 1:40,000.

Step 2 - Use the **Manage Tile Cache** tool found in **Data Management Tools – Tile Cache** to create a local tile cache using the MXD from **Step 1** as the **Input Data Source**, as in the example at left.

In this example, a tile cache covering Coconino National Forest's ~2 million acres was created in less than 15 minutes using an i7 2.7 Ghz Win7 64-bit laptop with 16 GB of RAM. Check-on all desired tile scales, being mindful that each added level of zoom significantly increases relative file size. This tile cache's size was 917 MB, far less than estimated by the tool dialog's **Estimated Disk Space** value.

Specifying an **Area of Interest** feature class in the tool's dialog will "clip" the FS Topo cache to an AOI.



The actual maximum zoom level that can be achieved seems to fall roughly midway between the two largest checked-on tile scales. For instance, the tile package produced in this example stops zooming at about 1:6,000, and just begins to pixelate beyond that.

Specifying an **Area of Interest** feature class in the tool's dialog will "clip" the FS Topo tile package to an AOI.

Step 3 - Once the initial tile cache has been developed, it can be used to create any number of subsequent TPK-format tile packages having the same, or smaller, spatial extents, and having the same, or lesser, tile depth using the **Export Tile Cache** tool found in **Data Management Tools – Tile Cache**, as illustrated at left.

In this example, running **Export Tile Cache** at the full Forest-wide extent and native tile depth completed in less than 10 minutes, and had a file size of ~750 MB. Reducing the maximum scale by one zoom level resulted in a TPK file size of ~300 MB. Once again, the tool dialog's **Estimated Disk Space** value is far in excess of the actual size.

An example of the FS Topo tile package in ArcGIS Collector is illustrated below.

