

To derive Population Density data for drainage basins:

1. Convert Block shapefile to Raster GRID – Spatial Analyst – Convert – Features to Raster: Input features: (blocks.shp), Field (PopDen), Output cell size (the same as the land cover data that you are going to use – 100 ft for NLCD/CCL), Output raster (block_pd)
2. Add the Drainage Basins layer
3. Spatial Analyst – Zonal Statistics: Zonal dataset (Drainage Basins Shapefile), Zone field (basin number), Value raster (block-pd GRID), Ignore NoData in calculations.

Note: if unable to run statistics for the whole Grid

1. *Split the Drainage Basins Theme into major, regional, sub, and local basins*
2. *Repeat step 3 for each basin*
3. *Merge all fragments together*